

1820. co. 9.

D E S I G N S

F O R

C H I M N I E S :

A N D T H E

P R O P O R T I O N S

They bear to their respective Rooms ;

C O N T A I N I N G

More than EIGHTY EXAMPLES of that Kind,

A L S O V A R I E T Y O F

Arches, Doors, and Windows.

T O W H I C H I S A D D E D,

A concise, but clear Description of the FIVE ORDERS, regulated by a Scale of Twelve equal Parts.

W I T H S O M E

Observations on Rules and Methods used in Drawing.

T H E W H O L E

Neatly engraved on FIFTY Octavo COPPER-PLATES.

By A B R A H A M S W A N, Architect.

L O N D O N :

Printed for the AUTHOR :

And Sold by HENRY WEBLEY, in Holborn, and
JAMES BUCKLAND, in Pater-noster Row.





THE
P R E F A C E.



ALTHOUGH I had fully purposed not to have published any more TREATISES of this Kind, yet by the Desire of several of my Friends and Acquaintance, I have been prevailed on again to take up the Pencil, to present the Publick with the following small Piece for the Pocket, well knowing, the Utility a Work of this Kind, which Persons may have recourse to, as often as Occasion requires,

iv *The* P R E F A C E.

quires, must be of, to all who are any ways concerned in Building.

I HAVE, in the following Sheets, and whatever else I have published, endeavoured to avoid all Perplexity, and to set Things in as clear a Light as I was able, by placing the several ORDERS, and other DESIGNS in their true Position; being thoroughly persuaded, that Things in their natural Form and Order are easiest understood, and best retained, by every Capacity; and that proper DESIGNS, may assist the Ideas and Memory, even of the greatest Genius.

THAT the Work might be more portable and convenient for the Pocket, I have greatly reduced its Thickness, by placing several Examples in one PLATE, many of which are drawn at large, being truly sensible, that small Things cannot be sufficiently expressed for any one to draw after; especially

The P R E F A C E. v

especially young Practitioners, whom, I should, by any means, be glad to assist and encourage ; for how can any one represent a small Thing, which he was never able to draw at large ; for which Reason every Scheme must be lame and defective, unless the proportional Measures are set to each Member, without which Assistance, no Design can ever be well executed.

WHEREFORE, as it is certain that the Human Faculties are capable of the greatest and the highest Improvements, when supported by Industry, with which a moderate Capacity may surpass an indolent Genius : And as it is the Duty of every one, to render himself by some Means or other an useful Member of Society, and not to bury his Talent in Oblivion. Thus, whatever Knowledge I have gained from long Practice, Experience, and the steady Application of upwards of forty Years to Business, I am will-

vi *The* P R E F A C E.

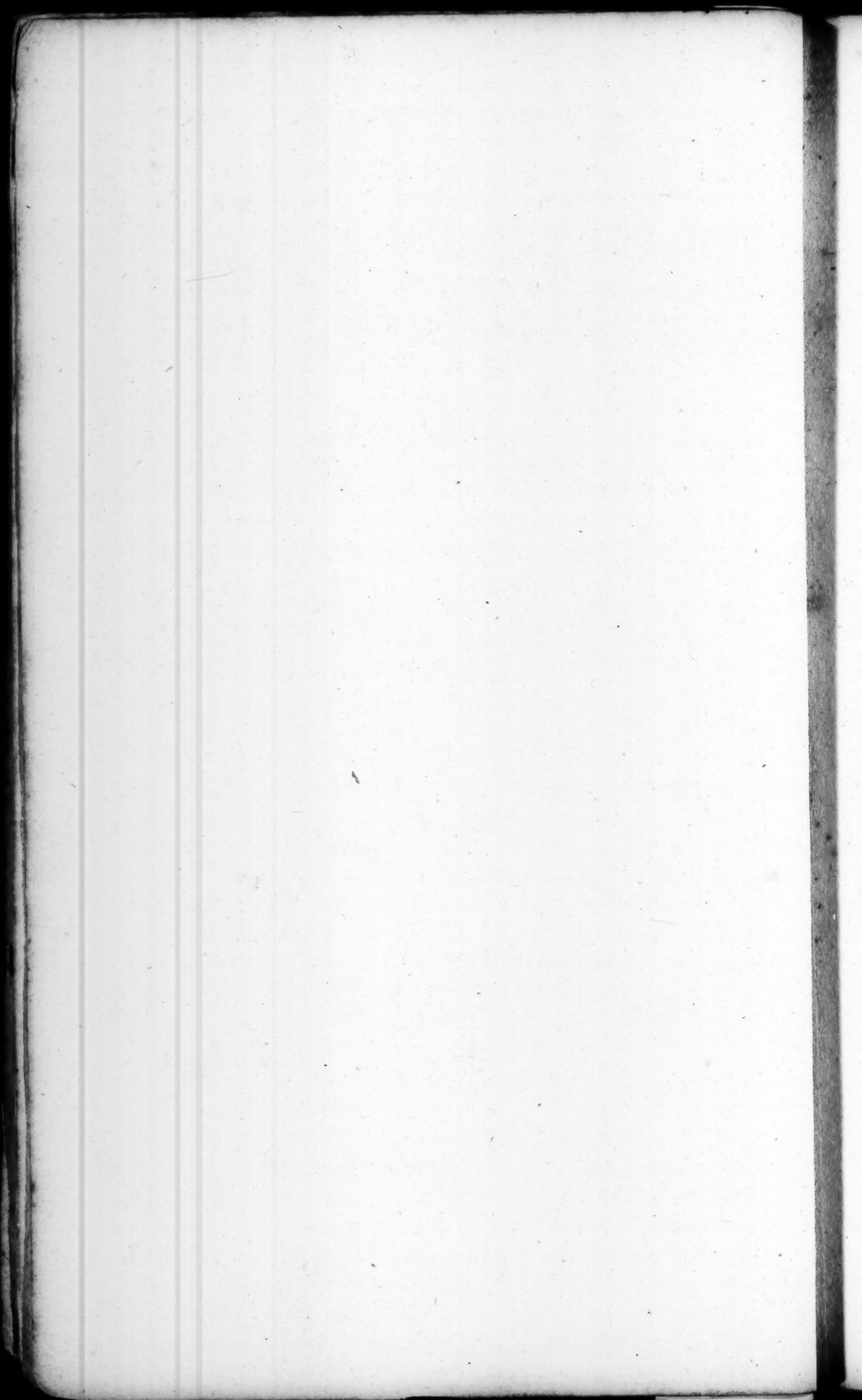
ing to communicate for the Service of my Brethren Artificers; and with that Design have endeavoured to make as easy as possible, whatever, in the Art of Building, to me appeared difficult or obscure; and most heartily wish, all my Labours may meet with the desired Effect.

PERFECTION is not what I aim at, for, neither Time nor Experience, can render any Person completely finished, in the Arts of Drawing or Designing; and is what the most celebrated AUTHORS never yet arrived at.

ARCHITECTURE is a large Field for a Man to walk in, and, as in an extended Prospect, while you are considering one Object, others will intrude upon your View; so, while a Person is drawing one Design, more will croud in upon him, and there is no End thereof.

WHERE-

WHEREFORE, though there are already erected great Numbers of grand and good Designs, which do Honour to their Masters ; consisting of proper Proportions, Scymetry, and great Harmony of Parts ; universally received, esteemed, and approved of, for their Beauty and Majesty ; as being capable of forcibly striking the Eye of the Beholder : Yet there will always remain Room for farther Invention , nor can I, or any one, pretend to set any Bounds to the Faculties and Judgment of the Mind ; which will always be making fresh Discoveries and new Improvements.





DESIGNS, &c.

Of the Ornaments and Decorations for CHIMNIES.

1st.  THE Width of the *Architrave* should never exceed one-sixth Part of the opening of the *Chimney*.

2^d. The Heights of the *Freeze* to *Chimney Pieces* are various, according to the different Embellishments with which they are intended to be enriched.

If the *Freeze* is swelling, it should not exceed two-thirds of the Width of the *Architrave*, when used to *Chimnies*.

If

If it be flat, it ought not to be less than three-fourths; nor should it ever exceed the whole Width of the *Architrave*, above one-sixth Part: This may be decorated at the Discretion of the Artist.

3d. In regard to the *Pitch*, *Rise*, or *Slope* of *Pediments*, this must be according to the Height of the *Freeze*, on which the *Cornice* is to rest. This Rule must be general, not to place a low *Pediment* on an high *Freeze*, nor an high *Pediment* on a low *Freeze*, either of which will always have a very bad Effect.

N. B. If the *Pediment* springs from the *Tablet*, it will have the same Effect as an high *Freeze*.

The different *Rises* of *Pediments* may be two-ninths, two-elevenths, one-fourth, or one-fifth of the whole Extent of the *Pediment*, or any other *Proportions* between them.

If the *Pediments* to *Chimny Pieces* are open, their Opening may be from one-third to one-fourth, two-ninths, or one-fifth Part of the
Pediment's

Pediment's Width, according to the intended Decorations.

The upper *Ogee*, or *Cima Recta* of a *Pediment*, hath the *Diagonal* of the *Level*, or *Horizontal* one for its Height, for which Reason the *Ogee* at the Foot of the *Pediment*, ought to be somewhat less than common; the round Part thereof near a quarter of a *Circle*, and the *hollow* projecting something beyond its *Center* or right *Angle*; by which means the sloped Part will have a much better Effect.

4th. All *Trusses* to *Chimnies* that project forward cannot be too light in their Projections, as being near the Eye. If they are in the *Freeze*, they ought not to project more than one-third of their Height. Those which stand as Supports against *Architraves* on the Sides of *Chimnies*, may be made the Width of the *Architrave*, or something more, but should not project more than three-fourths of the Projection of the *Architrave*.

Of

Of DOORS *and* WINDOWS,
each of which have the same
Proportion of Parts.

1st. THE Height of these may be two
Diameters, or twice, and one sixth
Part the Width of the *Door*, or *Window*.

2^d. The Width of the *Architrave* should
be one-sixth of the Diameter of the Opening.
To a swelling *Freeze*, three-fourths of the
Width of the *Architrave*, may be allowed,
and it should not swell more than the *Ar-*
chitrave projects. If a flat or plain *Freeze*,
it may then be of the same Width with the
Architrave.

3^d. Where *Pediments* are placed on the
Outsides of Buildings, over Doors or Win-
dows, &c. such *Pediments* should not be open.

Of C O R N I C E S.

1st. C O R N I C E S ought not to exceed
more than one-fourth above the
Width of the *Architrave*.

2^d. To

2d. To Inside *Doors* the *Cornices* may be equal with the *Architrave*, or may exceed it by one-sixth of its Breadth.

3d. If there are *Trusses* to either, they ought not to exceed two-thirds of the Width of the *Architrave*, in their Width. Their Projection should not be less than three-fourths, or any other Proportion between that and the whole Width of the *Architrave*.

4th. The *Fillet* of the large *Ogee*, or *Ovolo* to the *Architrave*, ought never to be less than one half the Width of the *Ogee* or *Ovolo*, for if the *Fillet* be too small, the *Architrave*, though it have its full Size, will appear weak, and have a bad Effect, and I have seen many *Architraves* spoiled by their *Fillets* being too small: for the *Architrave* should always appear to have great Strength, as being the principal Band and Tie of the Work. If it be an upright *Architrave*, it should appear a sufficient Support; for which Reason, some great *Architects* among the Antients, have given the *Fillet* two-thirds of the *Moulding*; as sometimes small Things may have a great Effect.

5th. The

5th. The Ogee, or *Cima Recta*, which crowns the *Architrave*, ought to be bold, and the *Mouldings* which separate the *Facias* of the *Architrave*, may have small Projections, as being introduced for that Purpose.

6th. Regard ought to be had in drawing of *Mouldings*; some, like none well unless they are spoiled by crouding an heap of small *Mouldings* together with small *Fillets* or *Anulets*, which have little better Effect than a *Plain Chamber*; nothing appearing distinct, but rather all confused.

7th. All *Cornices* ought to be made according to the Distance at which they are to be viewed: The greater Distance the fewer Members, and those large and bold, that they may afford strong Shades, the better to distinguish each Part. The same may be observed in *Carvings*.

8th. Some, to form the upper *Cima Recta* of a *Cornice*, divide the Diagonal Line into two Parts, and strike each *Curve* by an equilateral Triangle, which makes it so stiff that it would better become the lower Bed of a *Cornice* than the soft and airy crowning of the
the

the *Entablature*. The best Method therefore to form the above Member, would be to make the *Centers* near right *Angles*, as they will then produce better Shades, the upper *Curve* to project something more than a right *Angle*, as having a much better Effect, and if used to the Outfides, there will not so much Water run down the *Cornices*.

9th. If two *Cornices* were formed of equal Heights and Projections, the one rightly described, the other not quite so, it would be found, that that which was truly formed would far surpass the other in Beauty.

Now that the whole may truly agree, it is necessary to have regard to the *bearing Parts*, that they are taken right, according to their proper Bearings; that is, upon the Principals on which they rest and depend, whether they be *Columns*, *Pilasters*, *Terms*, *Trusses*, or *Piers*, the extreme Parts of which, will produce their natural Returns, or Breaks of the *Entablature*, if they *Quoin* right, or as it is called by *Joiners*, if they *mitre* right.

Of

Of the FIVE ORDERS in ARCHITECTURE.

AN Order, properly so called, consists of a whole *Pillar* or *Column*, containing the *Base*, *Shaft*, *Capital*, and *Entablature*.

The chief Orders are five; three of which, viz. the *Dorick*, the *Ionick*, and the *Corinthian*, were the Inventions of the antient *Greeks*; the other two, the *Tuscan* and *Composite*, were added by the *Romans*.

Of the DORICK Order.

DORUS, a King of *Achaia*, is said to be the first Inventor of this Order, from whom it takes its Name, and is the most antient of the five.

The Height of this Column, may contain eight *Diameters* of the Column, including its *Base* and *Capital*.

The

The *Entablature*, which always means the *Architrave*, *Freeze*, and *Cornice*, contains two *Diameters* of the *Shaft*, or Body of the Column; so that any Height being given to this Order, it may be divided into ten equal Parts, eight for the Column, and two for its *Entablature*, one of these will be the *Diameter* of the Column at the *Base*; which being divided into five, one of which Parts being again sub-divided into twelve, this Scale will regulate all the Members of each Order; which are all drawn and figured with their Heights, and Projections in the Plates.

The *Intercolumnation*, is the Space or Distance between the Columns, which in this Order are regulated by the *Triglyphs* and *Metopes*.

The *Triglyph* is a projecting Part in the *Freeze*, over which stands the *Modillion* with its Bells. Where there is no *Fillet* to inclose the Bells, that Part is called a *Mutal*.

The *Metopes* are the Spaces between each *Triglyph*: The Width of the *Triglyph* and *Metope*, contain one *Diameter*, and a fourth;

B

of

of which the *Triglyph* contains one *Semi-diameter*, and the *Metope* three-fourths of a *Diameter* of the Column; so that there are three *Triglyphs* and three *Metopes* between the Centers of each Column.

Of the IONICK Order.

THIS by its Name seems to have been the Invention of the *Ionians*, and is second among the antient *Grecian Orders*.

In this Order, the Column with its *Base* and *Capital* contain nine *Diameters* of the Column.

The *Intablature* may be one *Diameter* and five-sixths, but should never exceed two *Diameters*.

The *Inter-columns* may be two *Diameters*, and one-fourth; this is regulated by its Number of *Modillions*, which are six, and six Spaces.

The *Modillion* and Space contain half the *Diameter* of the Column, and one Part and
an

an half from the *Scale*. The Width of the *Modillion* is ten Parts.

The Projection under which the *Modillions* are placed, is called a *Corona* or *Soffit*. The Spaces in the *Soffit* between the *Modillions*, are called *Coffers* in each Order.

N. B. The great Impropriety of making the *Volutes* or *Scrolls* to the modern *Ionick* Capital, has been very considerable, which will by no means admit of the ancient Capital; as it will make the Capital appear much too heavy, and greatly disoblige the Eye, and we see too many Examples of this Kind, which destroy the whole Beauty of the Order. [I have therefore given them a smaller Proportion. Some similar Observations might be made on the *Composite* Capital.

The Flowers in the Middle of the *Abacus* over the Center of the Column, should bear one-third of the *Diameter* of the Column in its Width, and not exceed two Parts from the *Scale*, more than one-third of the Column's *Diameter*.

The returned Part of the *Ovolo* or Quarter-round, upon the Top of the *Angle* of the *Capital*, should be in Width near one-sixth Part of the *Diameter* of the Column, or within one Part from the Scale.

Of the CORINTHIAN Order.

THIS is the last and most beautiful of the three antient Orders of *Greece*, and is the highest Pitch of *Architectnre*, to which they ever arrived, in point of Beauty and Elegance.

The Columns of this Order, including *Base* and *Capital*, are ten *Diameters* of the Columns in Height, though sometimes but nine and three Quarters, and at the lowest nine and an half.

The *Entablature* should never exceed two *Diameters*; nor be less than one and a half. The *Modillion* not less than ten Parts, nor more than eleven and an half in the Width.

Of

Of the COMPOSITE Order.

THIS Order was formed by the *Romans*, and is compounded of the *Corinthian* and the *Ionick*, by adding the *Ionick Volute* and *Ovolo* to the *Corinthian Capital*; in all other Cases it is much the same with the *Corinthian* in its greatest Altitude, viz. ten *Diameters* to its Column, &c. as before described.

I have added some Inrichments to the *Entablature* of this Order, to shew what might be introduced, thinking some Parts rather too plain: which ornamental Additions may be either followed or omitted at Pleasure. The Width of the under-side of the *Modillion* must very little exceed nine Parts, if larger, it will make it appear heavy.

Of the TUSCAN Order.

THIS Order which is of *Roman* or *Italian* Original, greatly resembles the antient *Dorick*, and is the strongest and the plainest of all the Five Orders.

Its Column, together with *Base* and *Capital*, is seven *Diameters* of the Column.

Its *Entablature* contains one *Diameter*, and three-fourths.

Of the DIMINUTION of C O L U M N S.

NONE of the Orders, except the *Tuscan*, ought to diminish more than a sixth, or less than an eighth, of the *Diameter* of the Column.

The *Tuscan* may diminish one-fourth, or two-ninths of the *Diameter*.

This diminishing may continue from the Top, to within two-sevenths of the Bottom of the Pillar.

In the *Corinthian* and *Composite* Orders if the Column diminishes only one-eighth, it will afford better Veins to the Leaves of the Capitals, and produce a much better Effect, as these Parts should always appear bold.

The

The like diminishing would well become the *Ionick* Order.

Of Three Quarter COLUMNS.

THERE are two Methods of forming these, which though they may seem to be nearly the same, will be found to produce a very different Appearance.

The first Method is to divide the *Diameter* of the Column into four Parts, and to take three of them.

The other is to divide the *Circumference* into four Parts, and to take three of them; which last Method make far the boldest and best Appearance: As in this Case only one-fourth of the Circle is obscured, while in the first one-third is inclosed.

Of PILASTERS.

THESE are by no means to diminish, except they stand with Columns.

In plain *Pilasters* their Projection may be one-sixth of their Width, and by no means more than two-ninths.

If they are fluted, sometimes one *Flute*, sometimes one *Flute* and an half; but they should never exceed two *Flutes* in their Projection.

Of ARCHES.

THESE are either Circular or Elliptical.

In circular Arches, if they are placed near the Eye, it is necessary that they rise somewhat more than the *Semi-diameter* of the Circle of which they are composed; as the Imposts will otherwise take off from the Sight of their Altitude, and cause them to appear flat and low.

If much elevated, it may increase from two Parts to six of the Scale.

The same regard may be had to *Arches* which are Elliptical.

The *Key-Stones* of the *Arches* may be thus estimated.

The

The *Doric Key-Stone* may be three-fourths of the *Diameter* of the Column in Height ; and about Twenty-eight Parts and an half from the Scale in Breadth at the Bottom of the Stone.

The *Ionick* may be three-fourths of the *Diameter* of the Column, and four Parts from the Scale. Its Breadth at the Bottom, near the same with the *Dorick*, or rather smaller.

In the *Corinthian* the *Key* is five-sixths of the *Diameter* of the Column, and its Width at the Bottom about one *Semi-Diameter* of the Column.

The *Composite* is nearly of the same Dimensions with the *Corinthian*.

And the *Tuscan* the same as the *Dorick*.

The *Key-Stones* may be ornamented with Heads, or other Decorations.

After what I have already said, by way of Explanation, which is more than I at first intended, I presume that the Inspection of the *Plates* cannot fail of being a sufficient Instruction for any moderate Capacity : I shall therefore

fore now conclude with a small *Explanation* and *Catalogue* of the several *Plates* in this Work.

LIST of the PLATES.

PLATE I. Four Designs of Chimnies, all of which are very rich. Any of the small Designs, which stand within the others, would have a very good Effect.

N. B. The *Trusses* to these, or any of the other *Chimnies*, may be exchanged or varied at Pleasure. But if these should not be sufficient, several other good *Trusses*, and likewise some *Terms*, may be seen in my Treatise on *Stair Cases*.

PLATE II. Four Designs of Chimnies. To the Left Hand of the large one is a *Term*, which may stand either as a Column, or a Pilaster.

PLATE III. Four Designs of Chimnies.

PLATE IV. The upper Parts of two Chimnies, drawn for the Size of the Design of the under Plate, but may be used at Pleasure.

PLATE

PLATE V. Four Designs for Chimnies.

PLATE VI. Two Designs for the upper Parts of Chimnies, the Pediment opened near a fourth.

PLATE VII. Four Designs of Chimnies, the Pediments of the inner ones near a sixth.

PLATE VIII. Two Designs for the upper Parts for Chimnies. These are drawn to the Size of the Design opposite. The Pediment open two-ninths; either of these would have a very good Effect.

PLATE IX. Four Designs for Chimnies.

PLATE X. Two Designs for the upper Parts of Chimnies, drawn to the Size of that opposite.

PLATE XI. Four Designs for Chimnies. On the Left Side is a Term, which may stand as a Column, or Pilaster.

PLATE XII. Six Designs for Chimnies.

PLATE XIII. Eight Designs for Chimnies.

PLATE

PLATE XIV. Eight Designs for Chimnies.

PLATE XV. Ditto.

PLATE XVI. Ditto.

PLATE XVII. Ditto.

PLATES XVIII. XIX. Two Designs for the upper Parts of Chimnies.

PLATE XX. Three Designs for Cornices.

PLATE XXI. Four Designs for Cornices. The Dentil Bed Moulds may be used to any other Cornice.

PLATE XXII. Four Designs for Cornices. Any of the Bed Moulds may be changed, which will make more Designs.

PLATE XXIII. Four Designs for Architraves.

PLATE XXIV. Nine Designs for Doors.

PLATE XXV. Eight Designs for Doors.

PLATE XXVI. Designs for Architraves.

PLATE

PLATE XXVII. Designs for Cornices to Doors.

PLATE XXVIII. An Architrave and Trufs at large.

PLATES XXIX. XXX. XXXI. XXXII. Ornaments for Trusses. The last with the Eagle's Head, makes a very magnificent Appearance; the ornaments cross each other down to the Scroll.

PLATE XXXIII. Two Designs of Pedestals for Stair Cases.

PLATE XXXIV. Four Tuscan Designs.

PLATE XXXV. Two Designs for *Dorick* Arches, and two for Doors.

PLATE XXXVI. Four *Dorick* Designs.

PLATE XXXVII. Two Designs of *Ionick* Arches, and two for Doors.

PLATE XXXVIII. Two Designs for *Corinthian* Arches, and two for Doors.

PLATE XXXIX. The Proportions of the *Tuscan* Order. On the Left Hand are the Pedestals of the *Corinthian*, *Ionick*, *Dorick* and

and *Tuscan* Orders. Their Width twenty-one Parts upon the Scale more than the Diameter of the Column. That of the *Dorick* is an exact Square, the others may be varied at Discretion.

PLATE XL. Proportions of the *Dorick* Order. Here the Column is divided into five equal Parts; of one of these Parts is made a Scale, which is divided into twelve equal Parts, by which all the Members are regulated. Over the Columns on the Right Hand are two Imposts; over each of these are represented the Architraves for the Arches. The uppermost may serve for the richer Orders. To the Left of these, is the Base and Sur-base.

N. B. To make the Scale: Draw a Line to any Length, at the End of which, set up one of the five Parts of the Column, and divide the Length of the Line into twelve equal Parts, then raise Perpendiculars to the Diagonal Line, which completes your Scale.

PLATE XLI. The *Doric* Entablature.

PLATE XLII. The *Doric* Cornice;
with the four internal Angles of the Soffit or
Corona,

Corona, and underfide of the Modillions. The Angle Coffers are increased or decreased by taking more or less of the Triglyph, as may be seen in the Plate.

PLATE XLIII. The *Ionick* Modillion at large. Half the Plan of a Capital, formed by an equilateral Triangle; with the Base, Sur-base, and Impost.

PLATE XLIV. The *Ionick* Entablature and Capital.

PLATE XLV. The *Corinthian* Capital, Base, Sur-base, and Impost.

PLATE XLVI. The *Corinthian* Entablature, with the Corona, and its external Angle.

PLATE XLVII. The *Corinthian* Modillion at large.

PLATE XLVIII. The *Composite* Capital, with its Base, Sur-base, and Impost.

PLATE XLIX. The *Composite* Entablature, with its Soffit.

PLATE L. Three Internal Angles of the *Ionick*, *Corinthian*, and *Composite* Orders.

RULES

RULES *for proportioning Chimnies
the Size to their respective Rooms,
may be near as follows.*

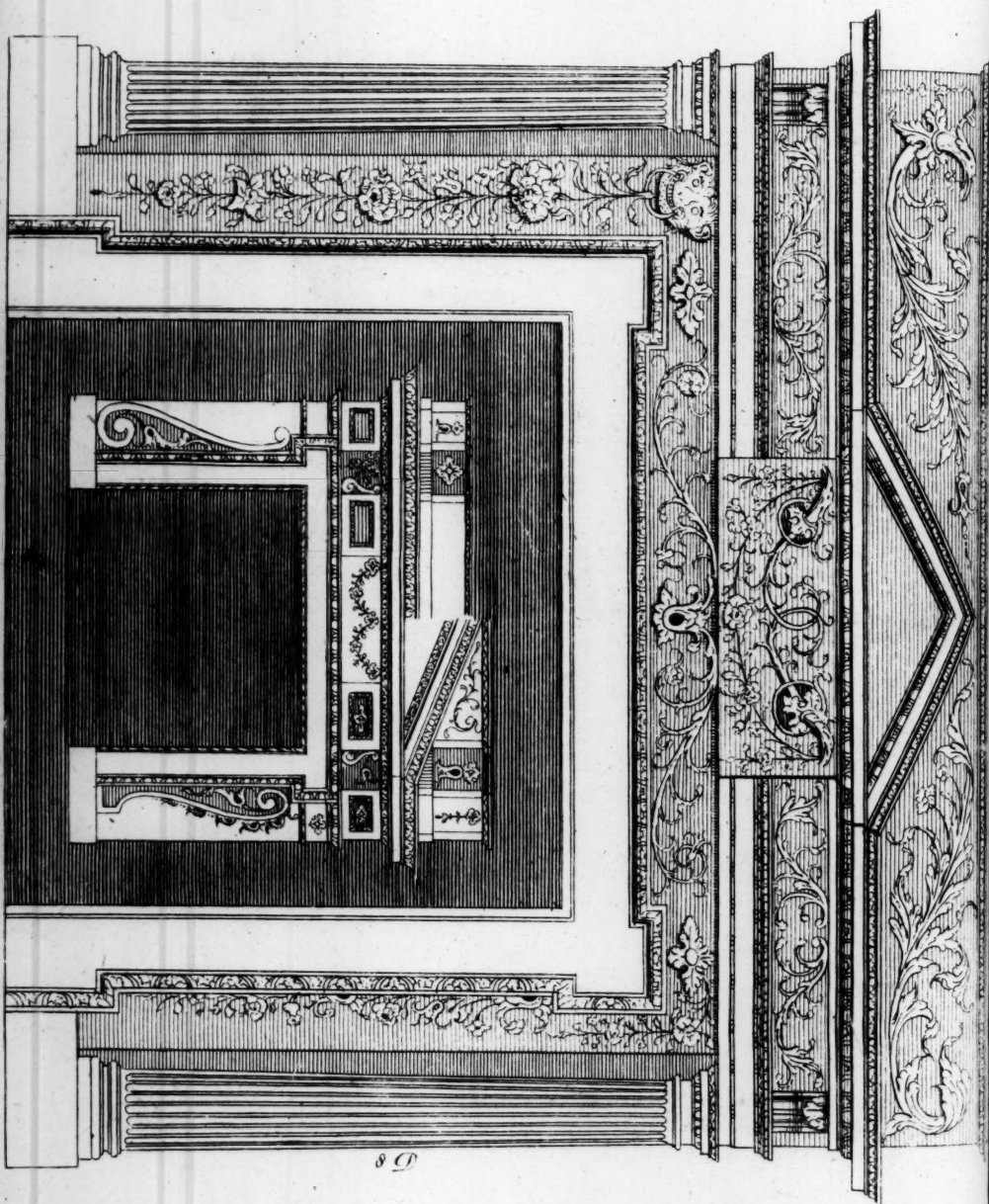
Size of Rooms	Width to Chimnies.		Their Heights.			Height to Cornices.	
	F.	In. P.	F.	In.	P.	I.	P.
14 Foot.	3	3	3	3		4	$\frac{1}{4}$
15	3	4	3	3	$\frac{1}{2}$	4	$\frac{3}{8}$
16	3	5	3	4		4	$\frac{1}{2}$
17	3	6	3	4	$\frac{1}{2}$	4	$\frac{5}{8}$
18	3	7	3	5		4	$\frac{3}{4}$
19	3	8	3	5	$\frac{1}{2}$	4	$\frac{7}{8}$
20 Foot.	3	9	3	6		5	
21	3	10	3	6	$\frac{1}{2}$		$\frac{1}{4}$
22	3	11	3	7		5	$\frac{1}{4}$
23	3	11 $\frac{1}{2}$	3	7	$\frac{1}{2}$		
24	4	0	3	8		5	$\frac{1}{2}$
25	4	0 $\frac{1}{2}$	3	8	$\frac{1}{2}$		
26	4	1	3	9		5	$\frac{3}{4}$
27	4	1 $\frac{1}{2}$	3	9	$\frac{1}{2}$		
28	4	2	3	10		5	$\frac{7}{8}$
29	4	2 $\frac{1}{2}$	3	10	$\frac{1}{4}$		
30 Foot.	4	3	3	10	$\frac{1}{2}$	6	
31	4	3 $\frac{1}{2}$	3	10	$\frac{3}{4}$		
32	4	4	3	11		6	$\frac{1}{8}$
33	4	4 $\frac{1}{2}$	3	11	$\frac{1}{4}$		
34	4	5	3	11	$\frac{1}{2}$	6	$\frac{1}{4}$
35	4	5 $\frac{1}{2}$	3	11	$\frac{3}{4}$		
36	4	6	4	0		6	$\frac{3}{8}$
37	4	6 $\frac{1}{2}$	4	0	$\frac{1}{4}$		
38	4	7	4	0	$\frac{1}{2}$	6	$\frac{1}{2}$
39	4	7 $\frac{1}{2}$	4	0	$\frac{3}{4}$		
40 Foot.	4	8	4	1		6	$\frac{5}{8}$

These Proportions are to the Flank Sides of the Rooms.

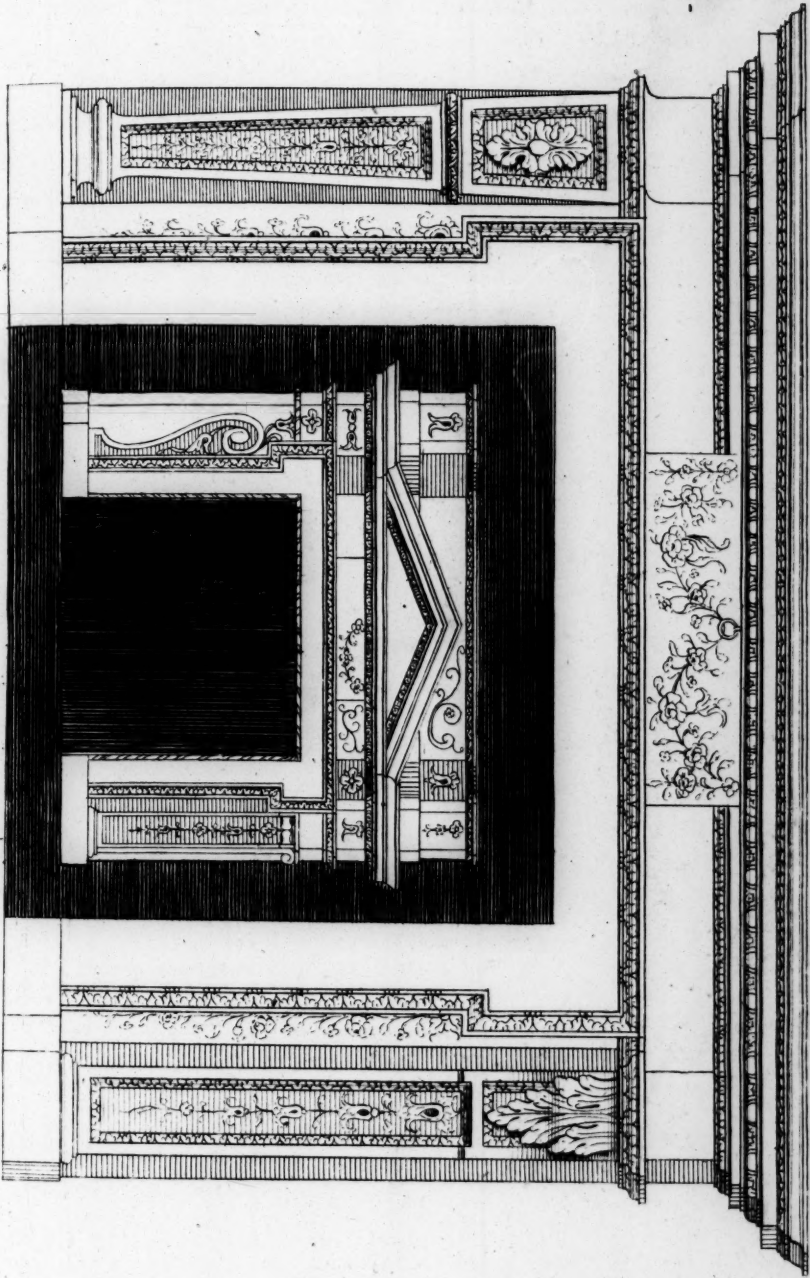
F I N I S.



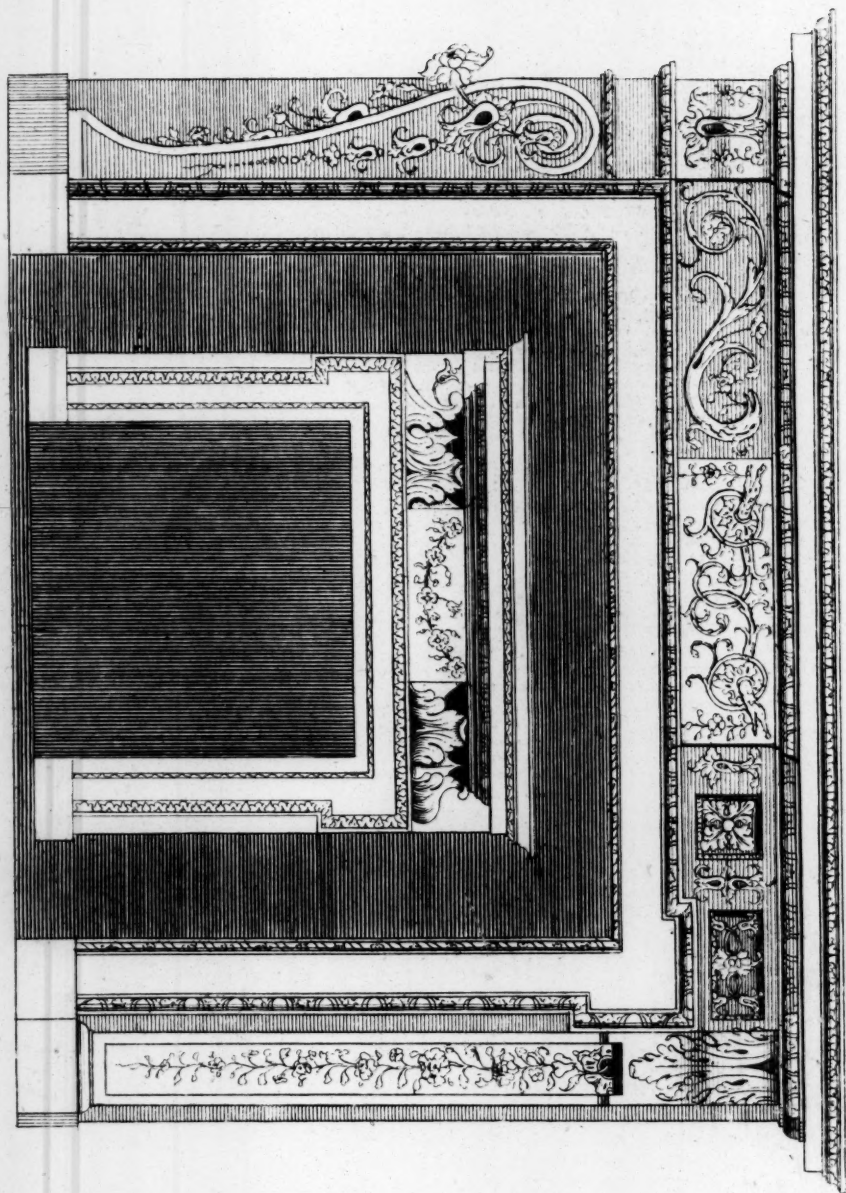


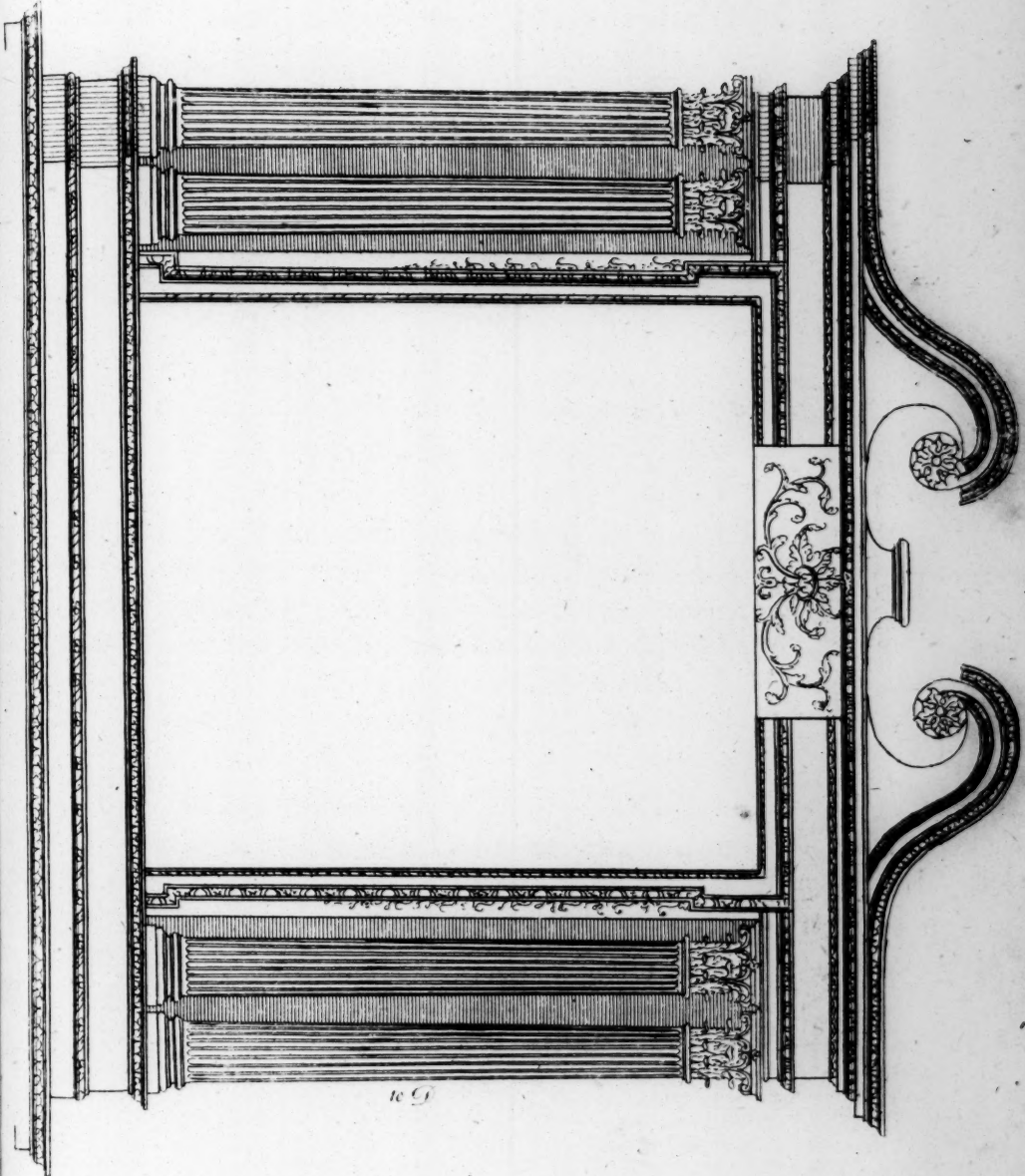


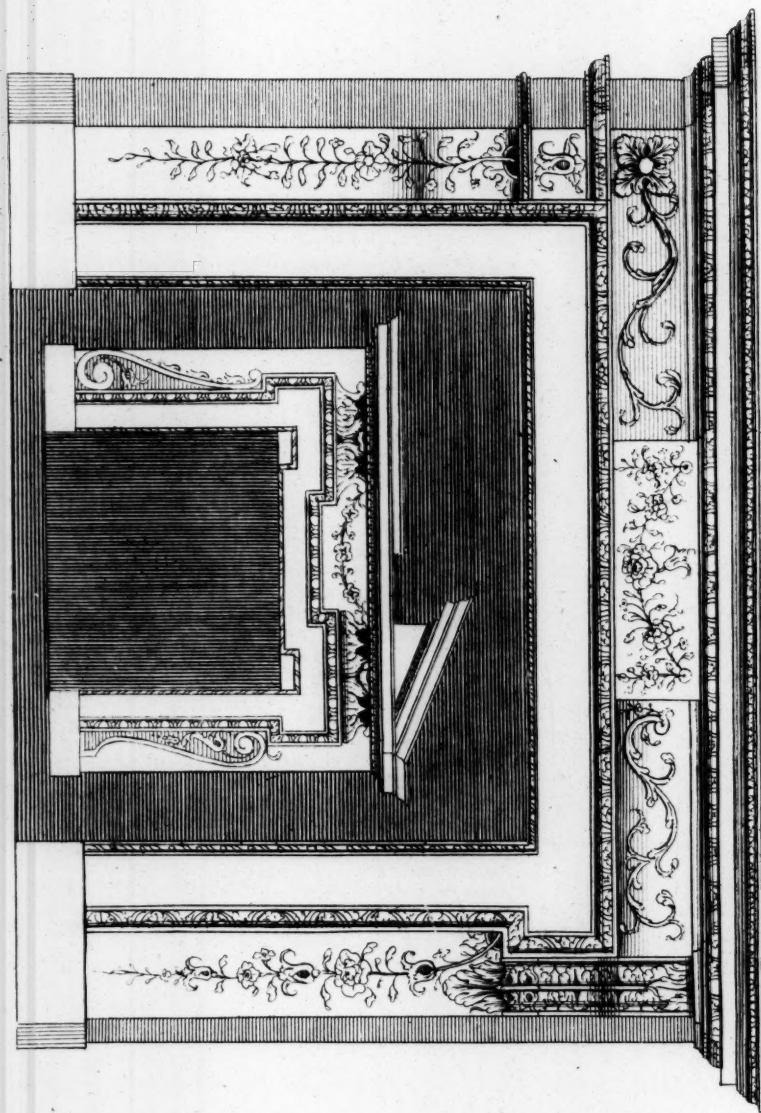
*This and the following Designs are Publish'd According to an Act of
 of George the Second By Abr Swan ARCH^T 22. Sept. 1768*

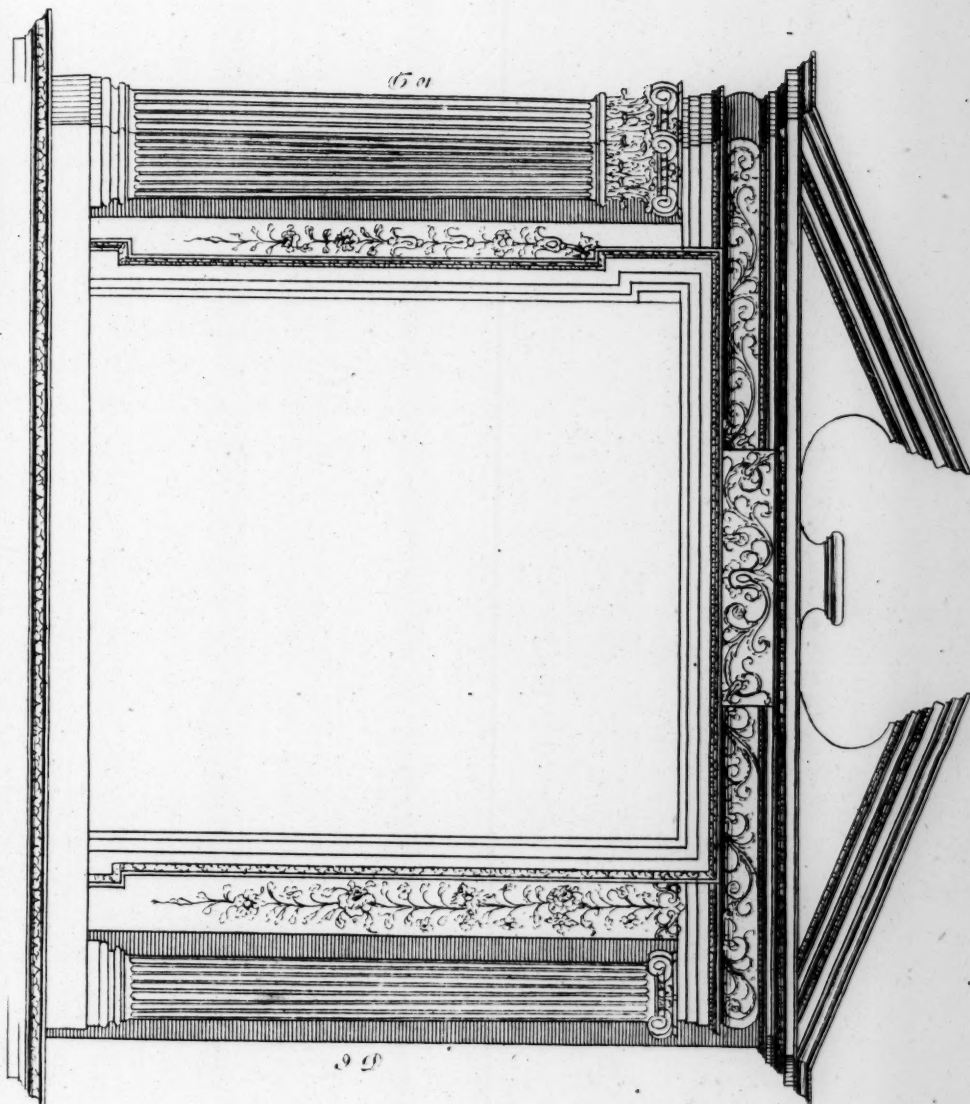


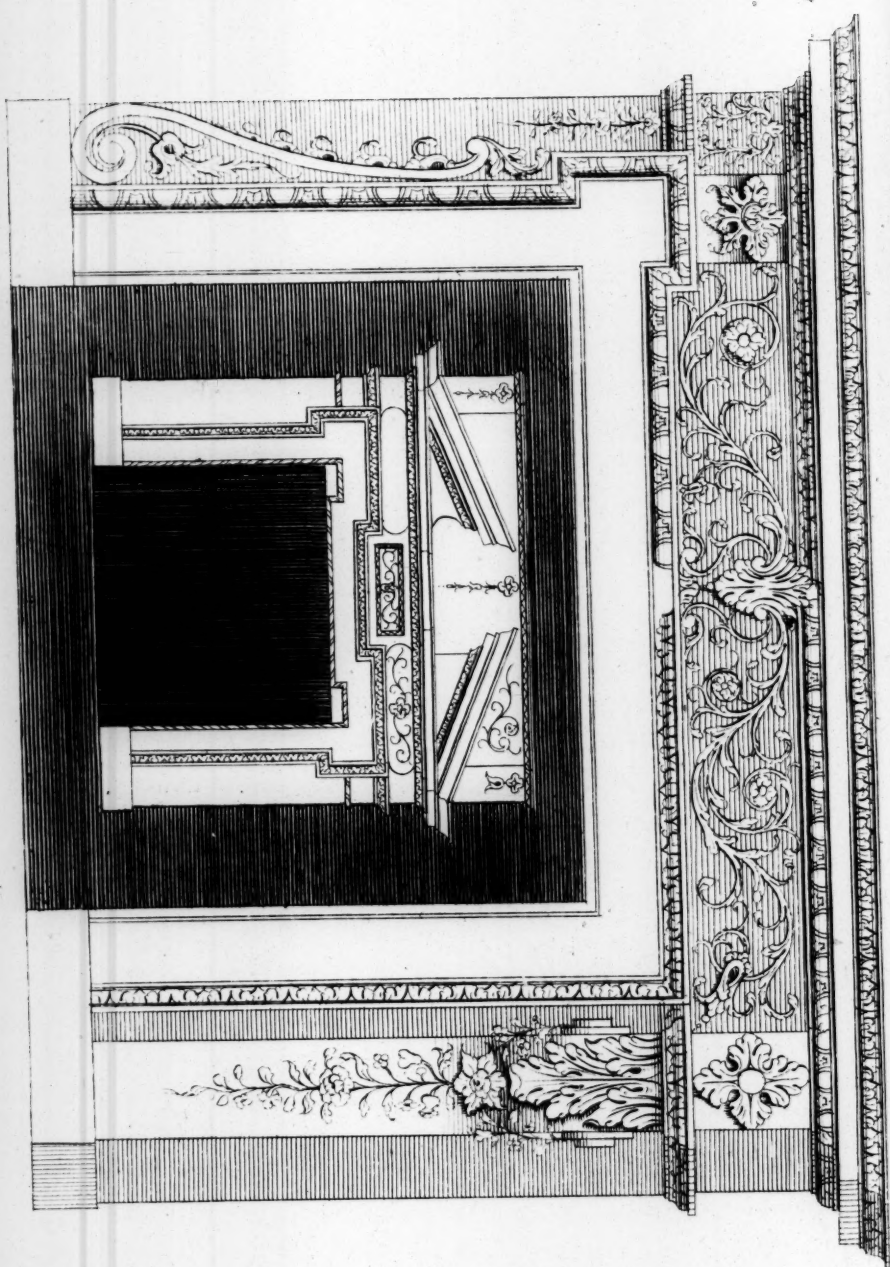
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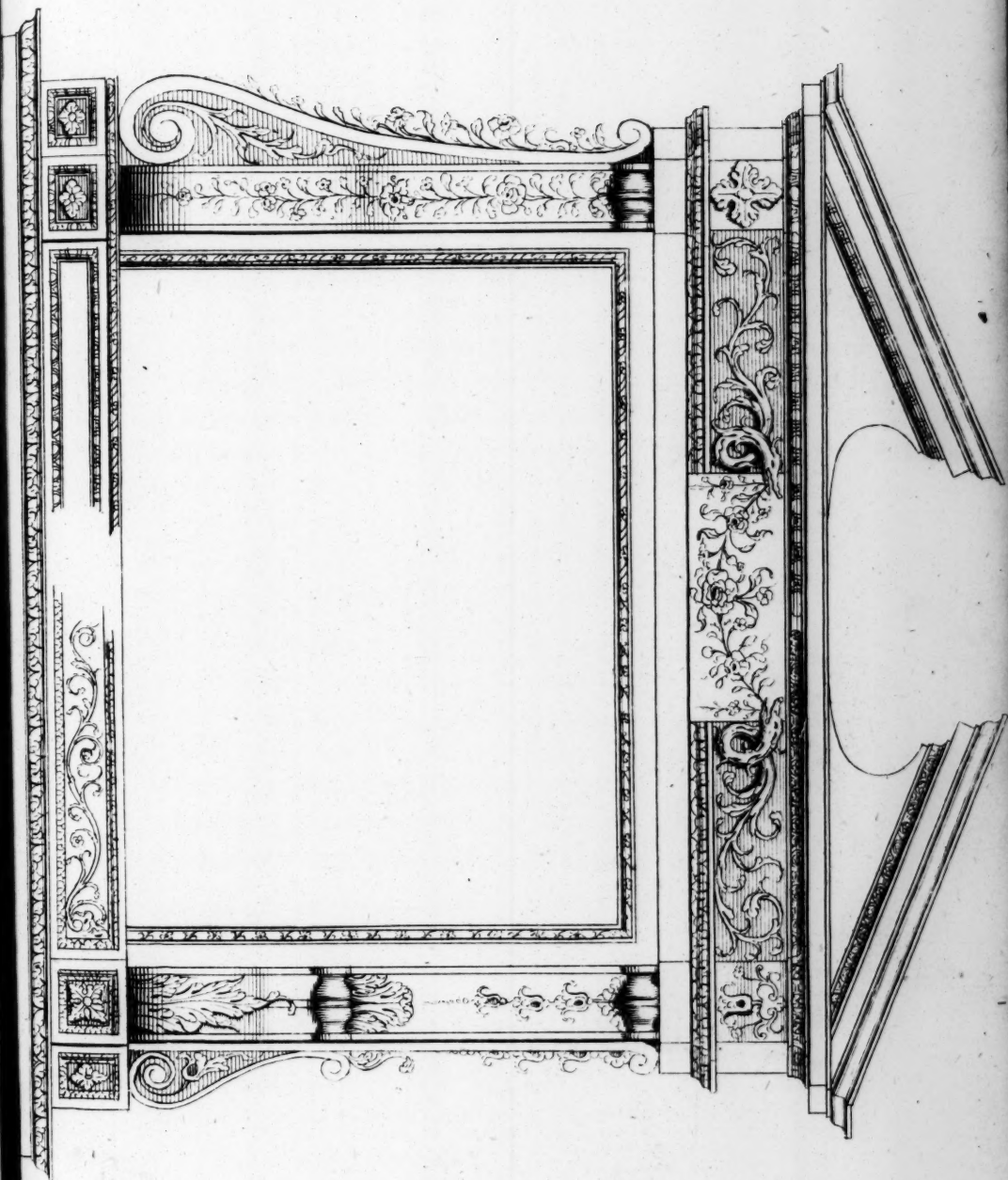


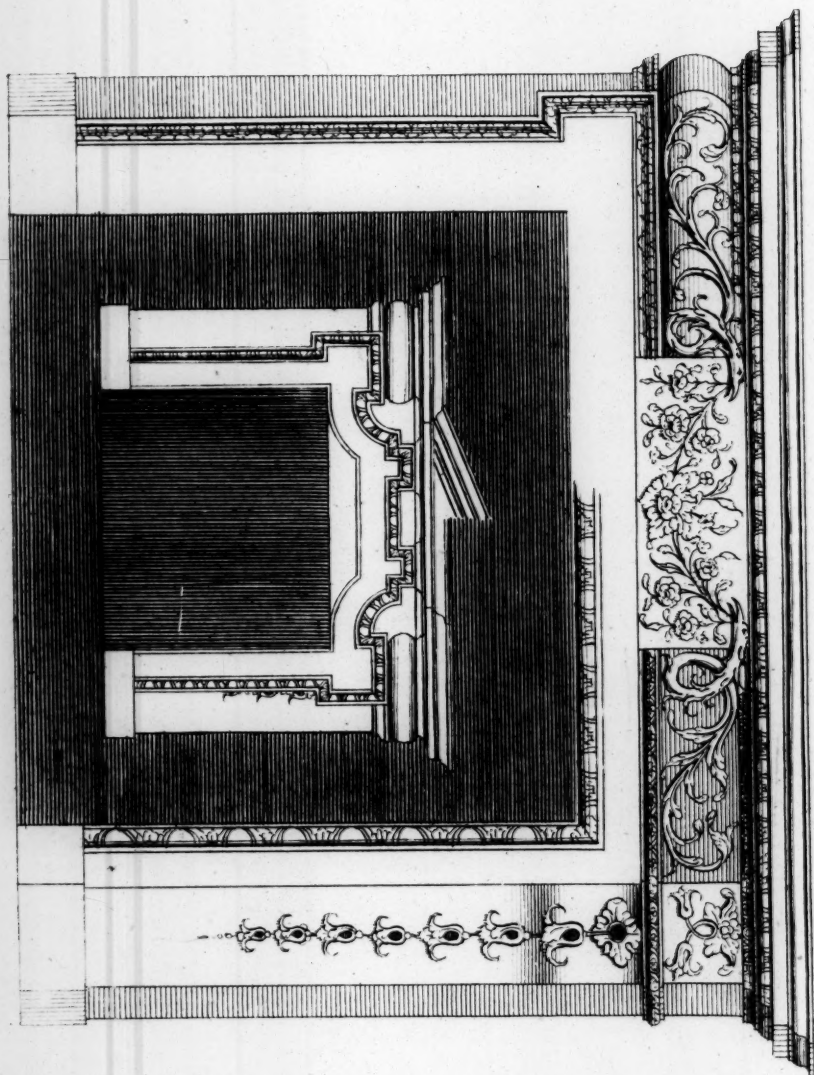


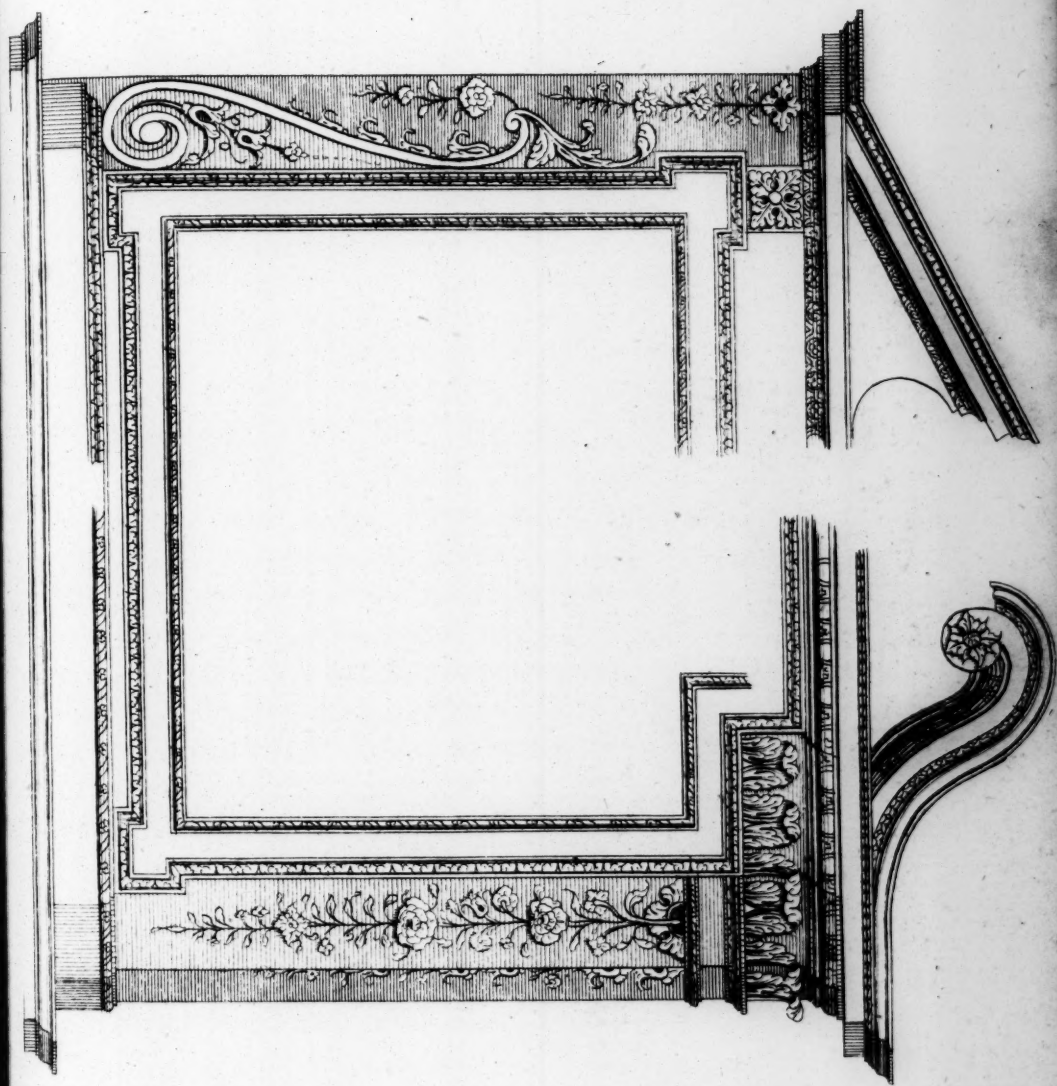


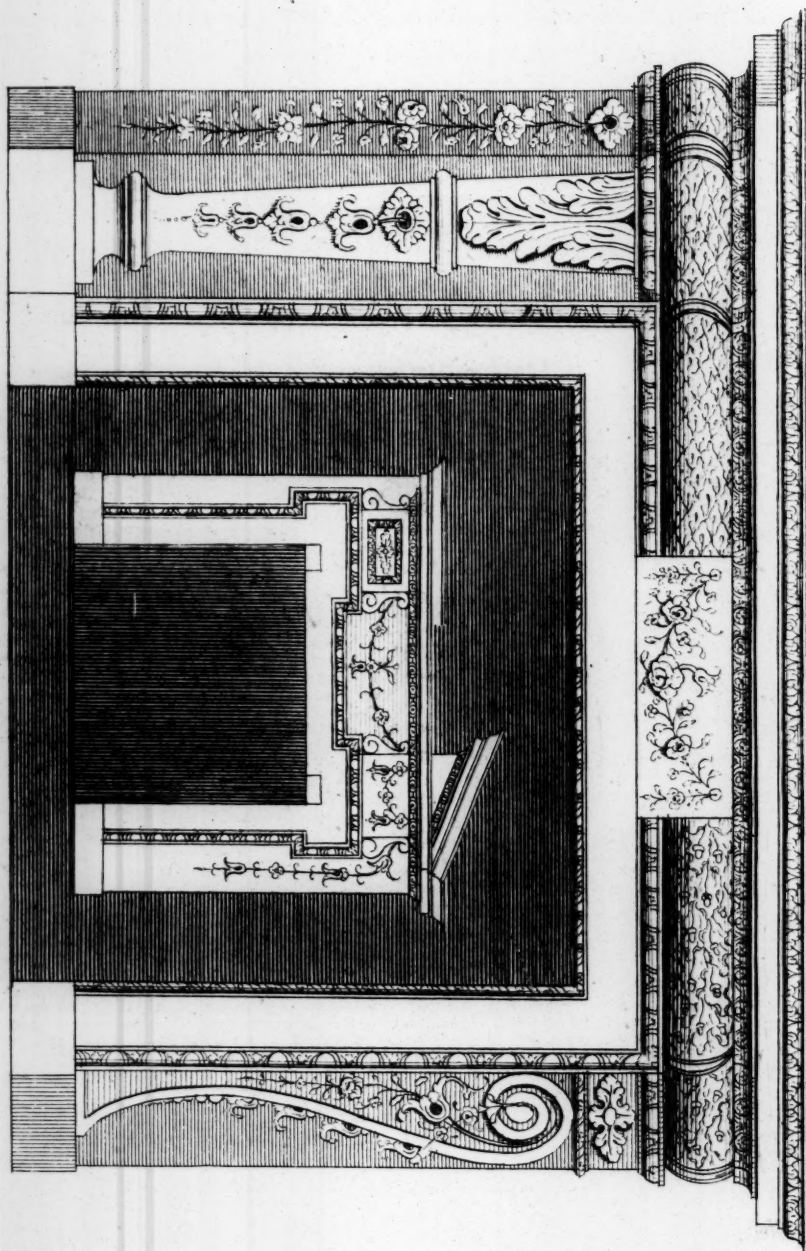


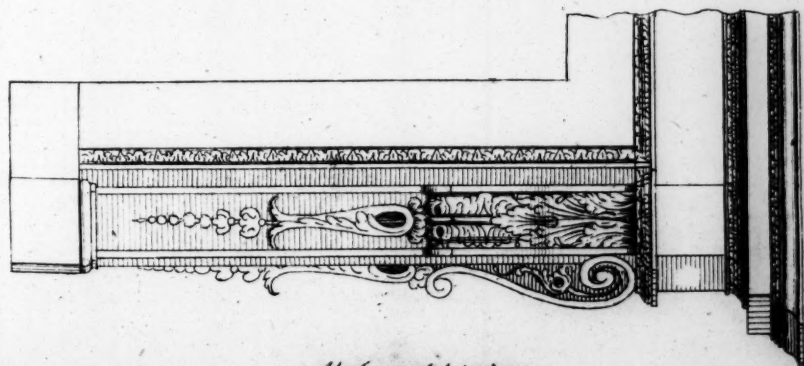
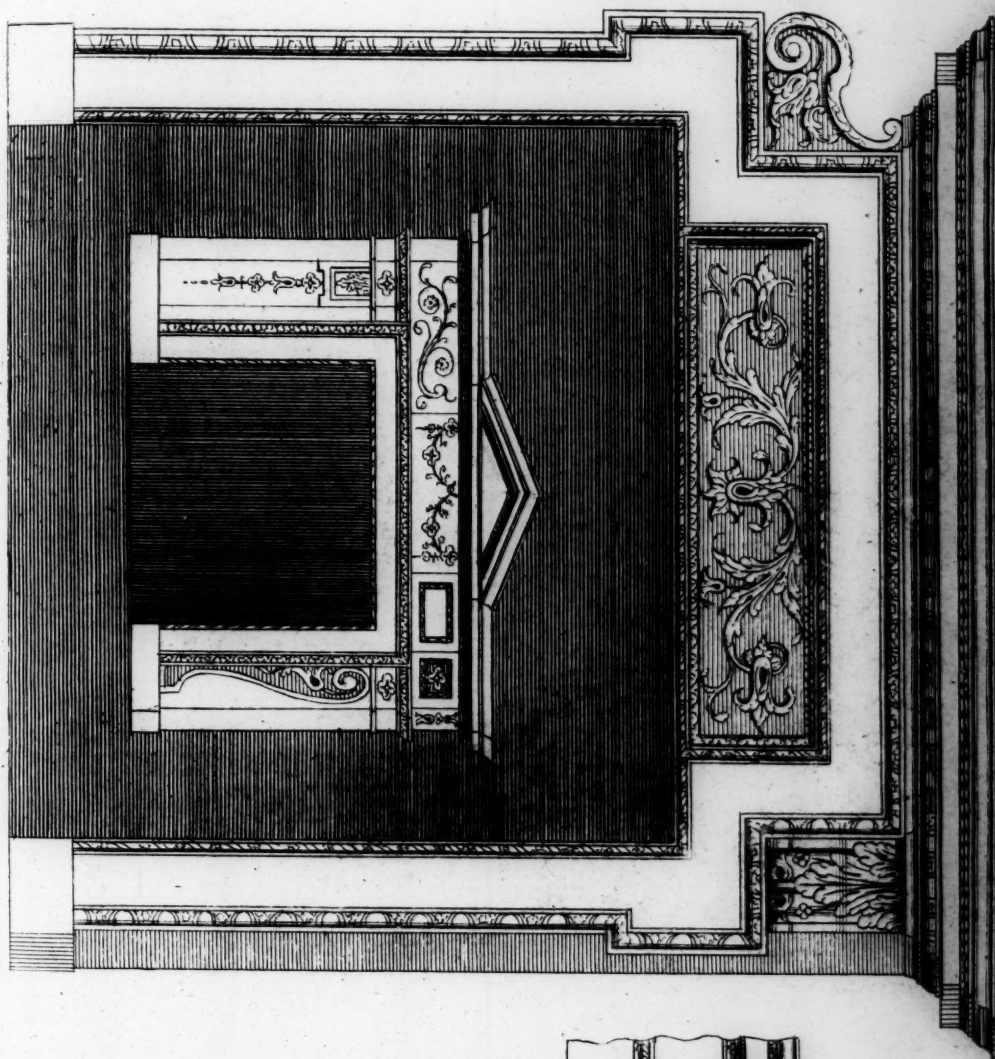
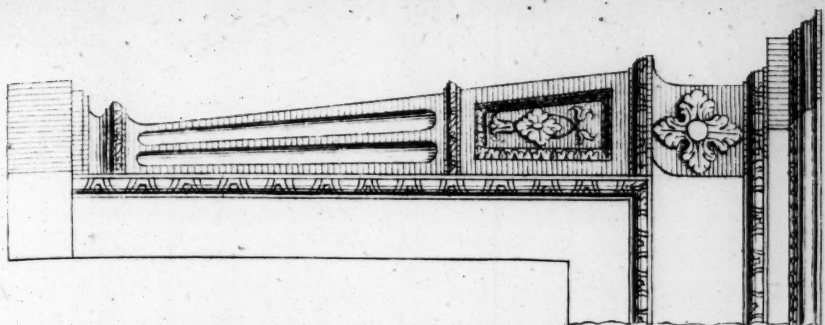


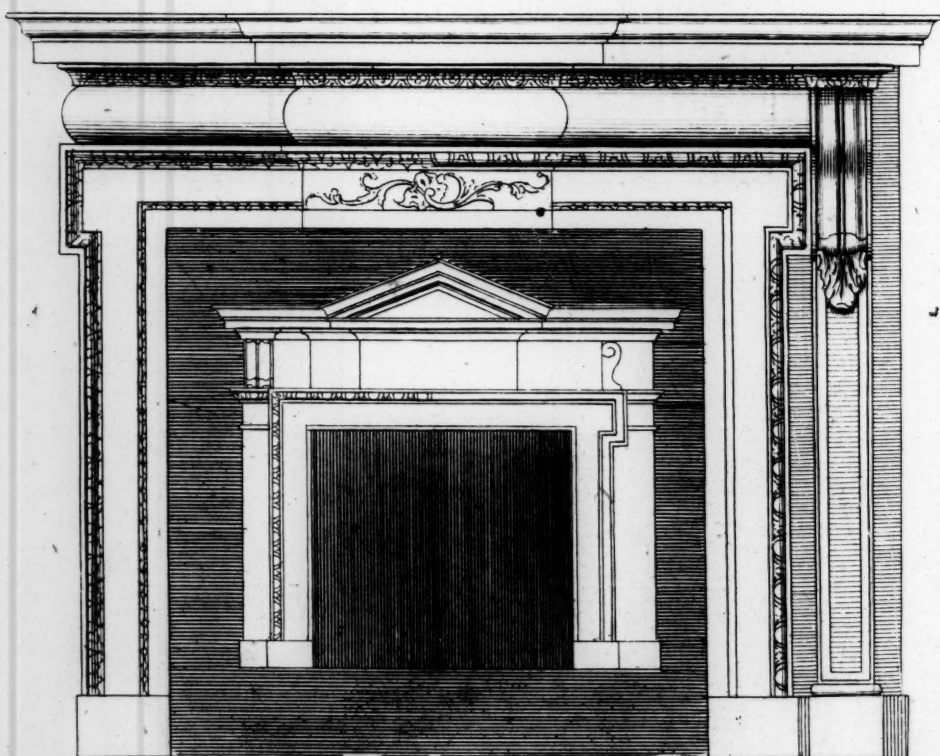
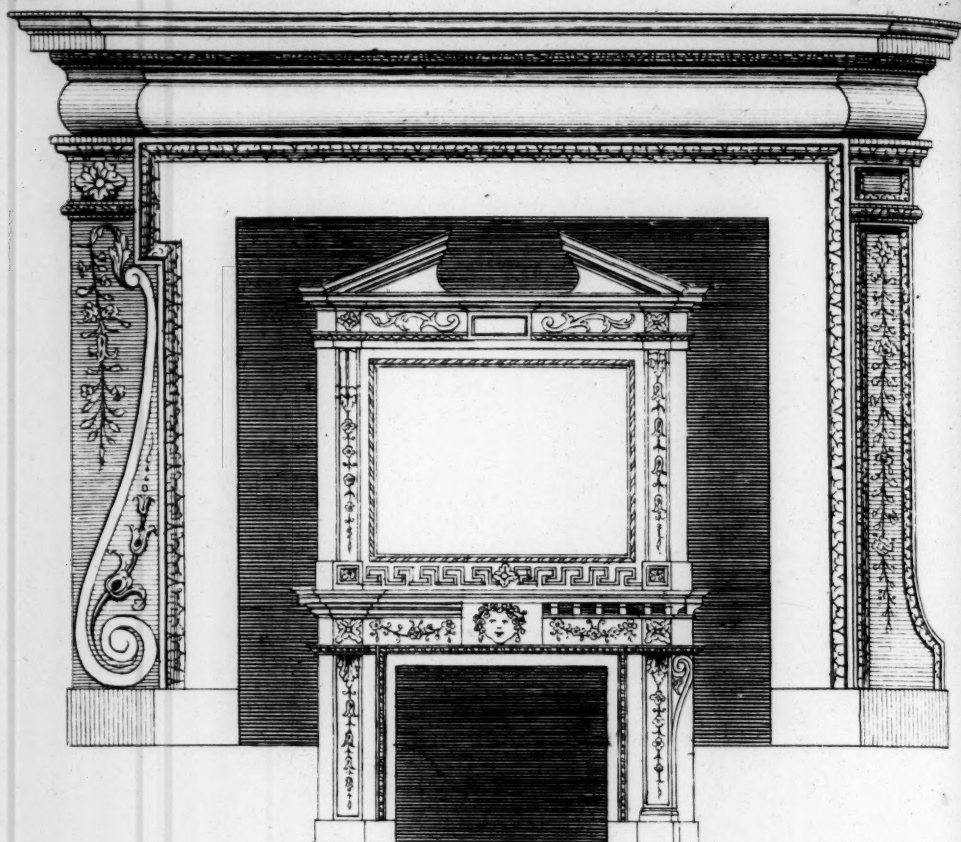


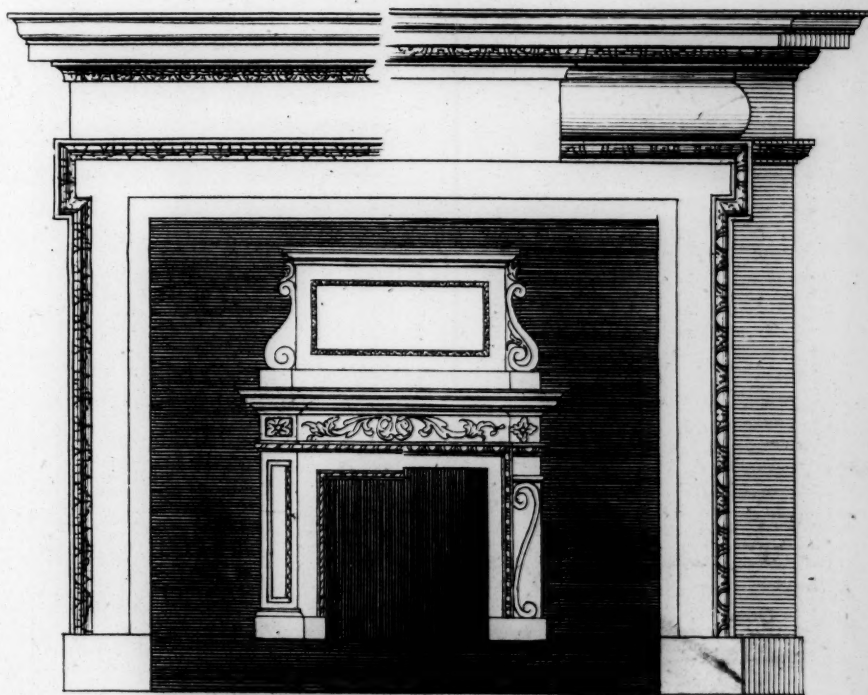
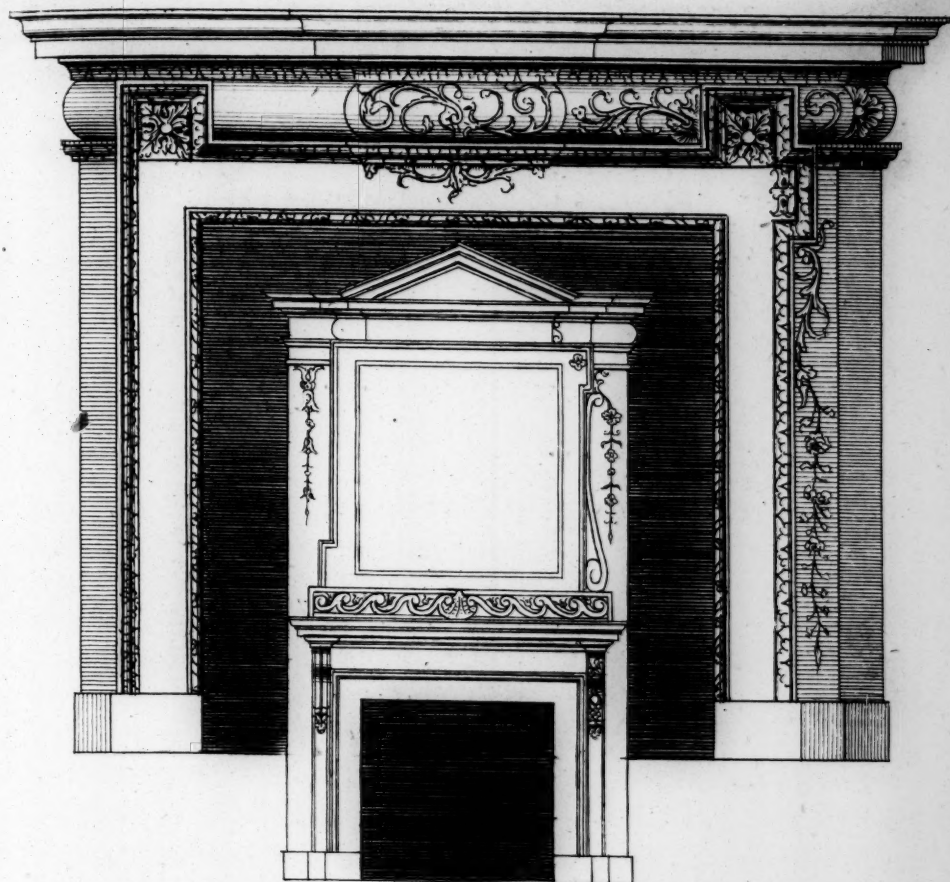


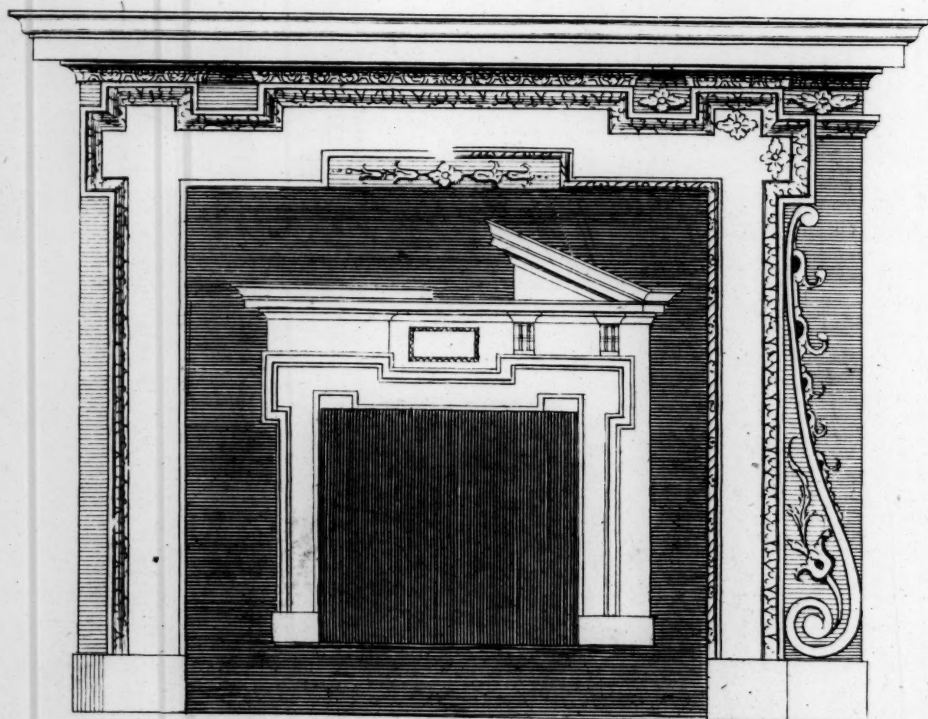
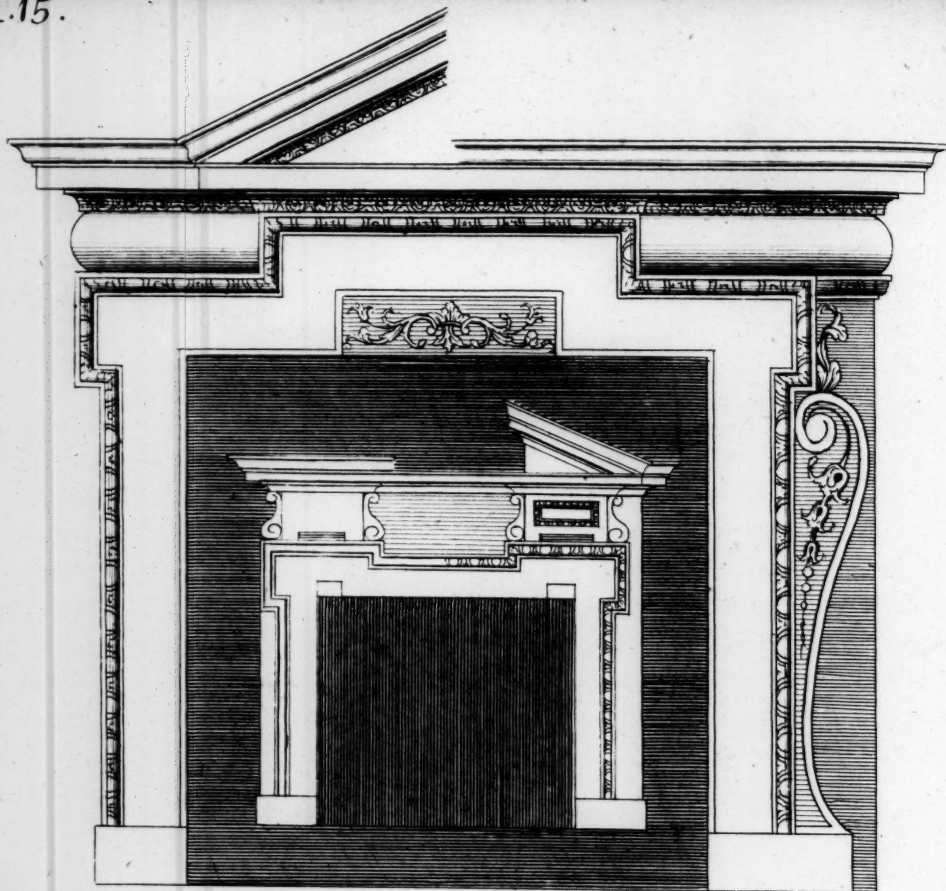


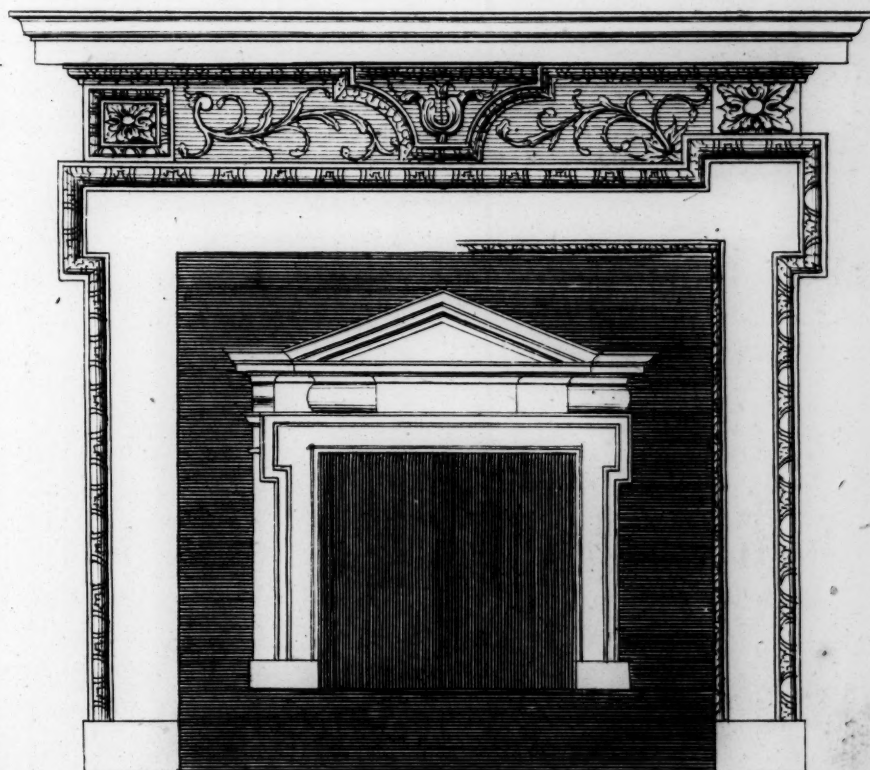
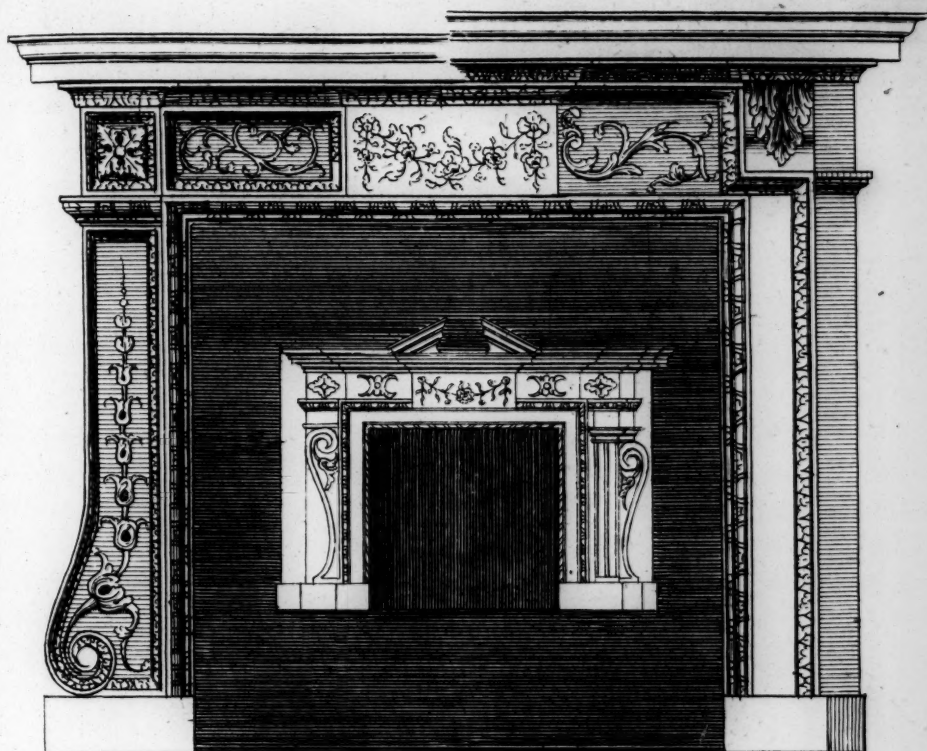




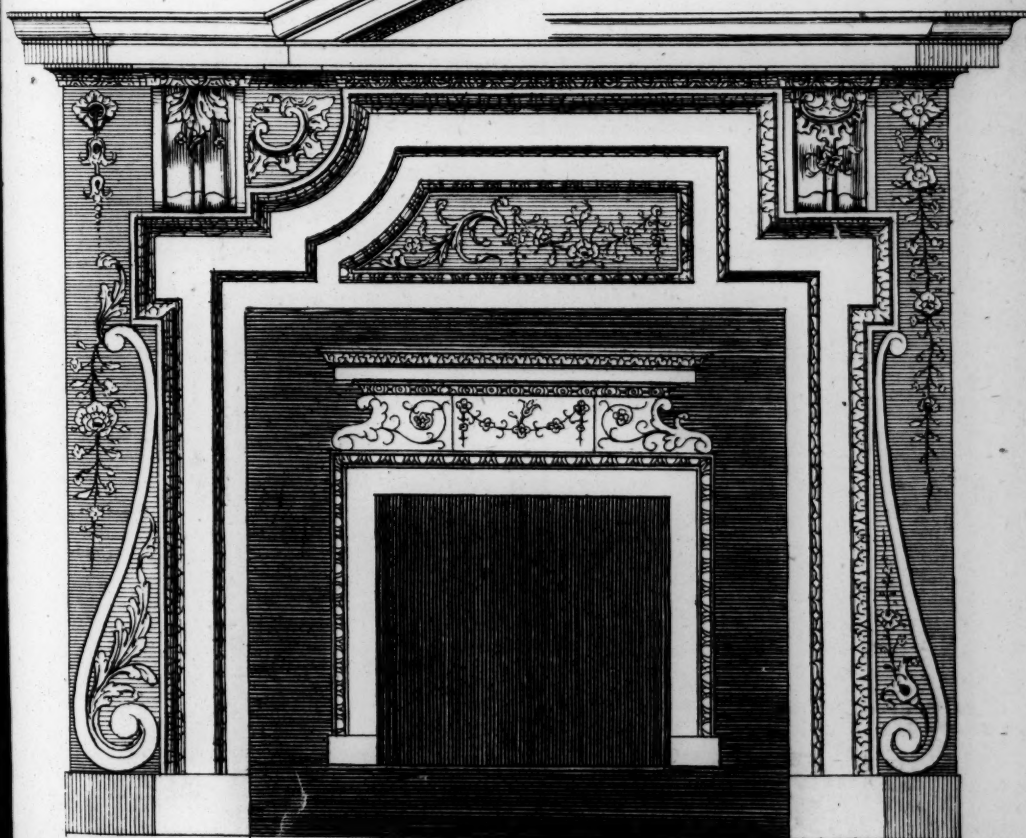
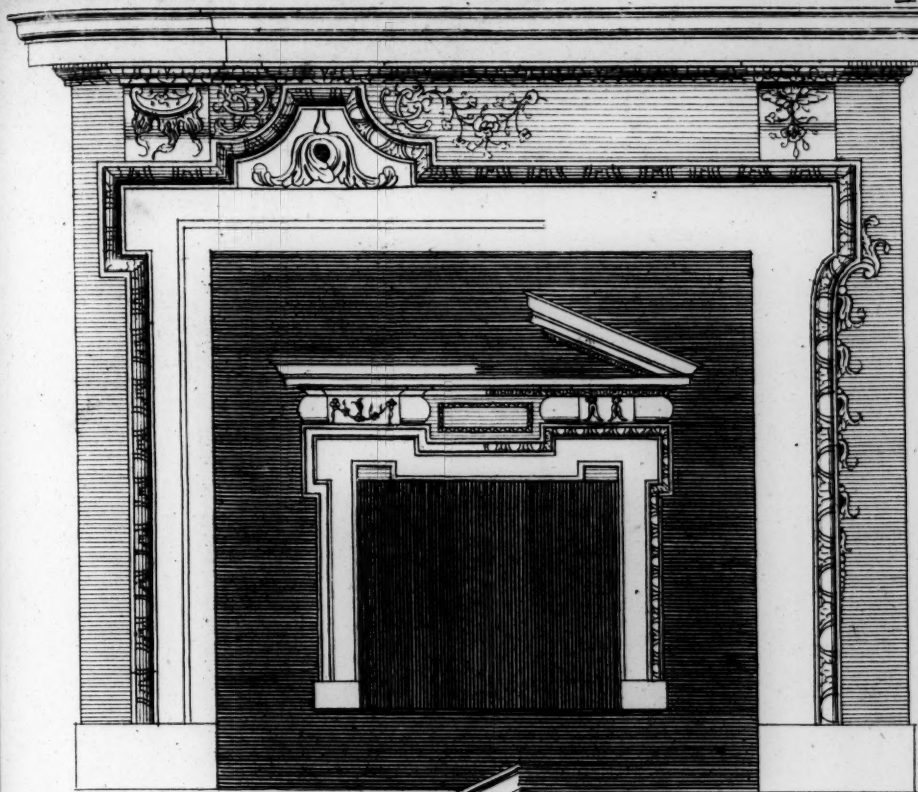


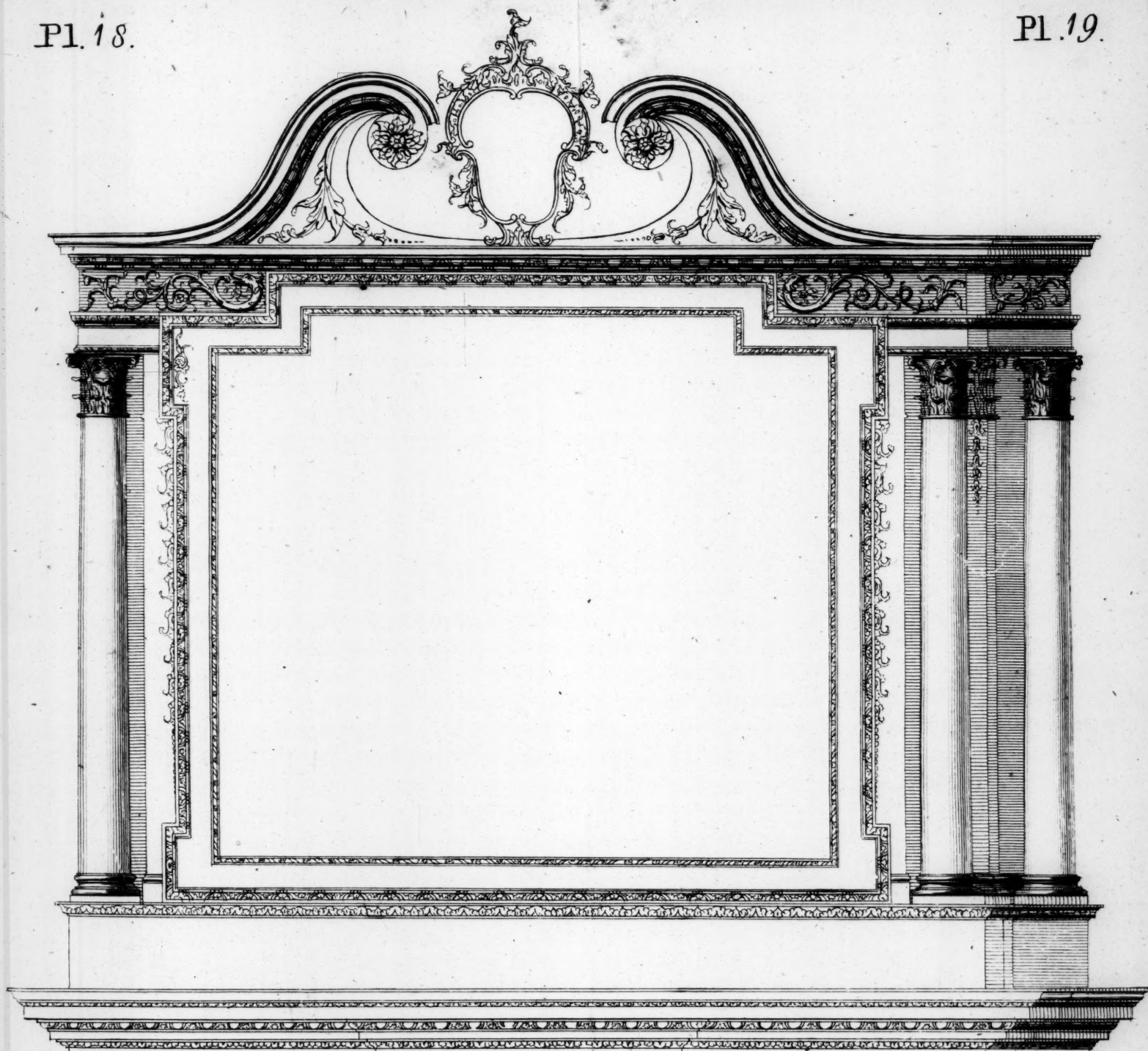


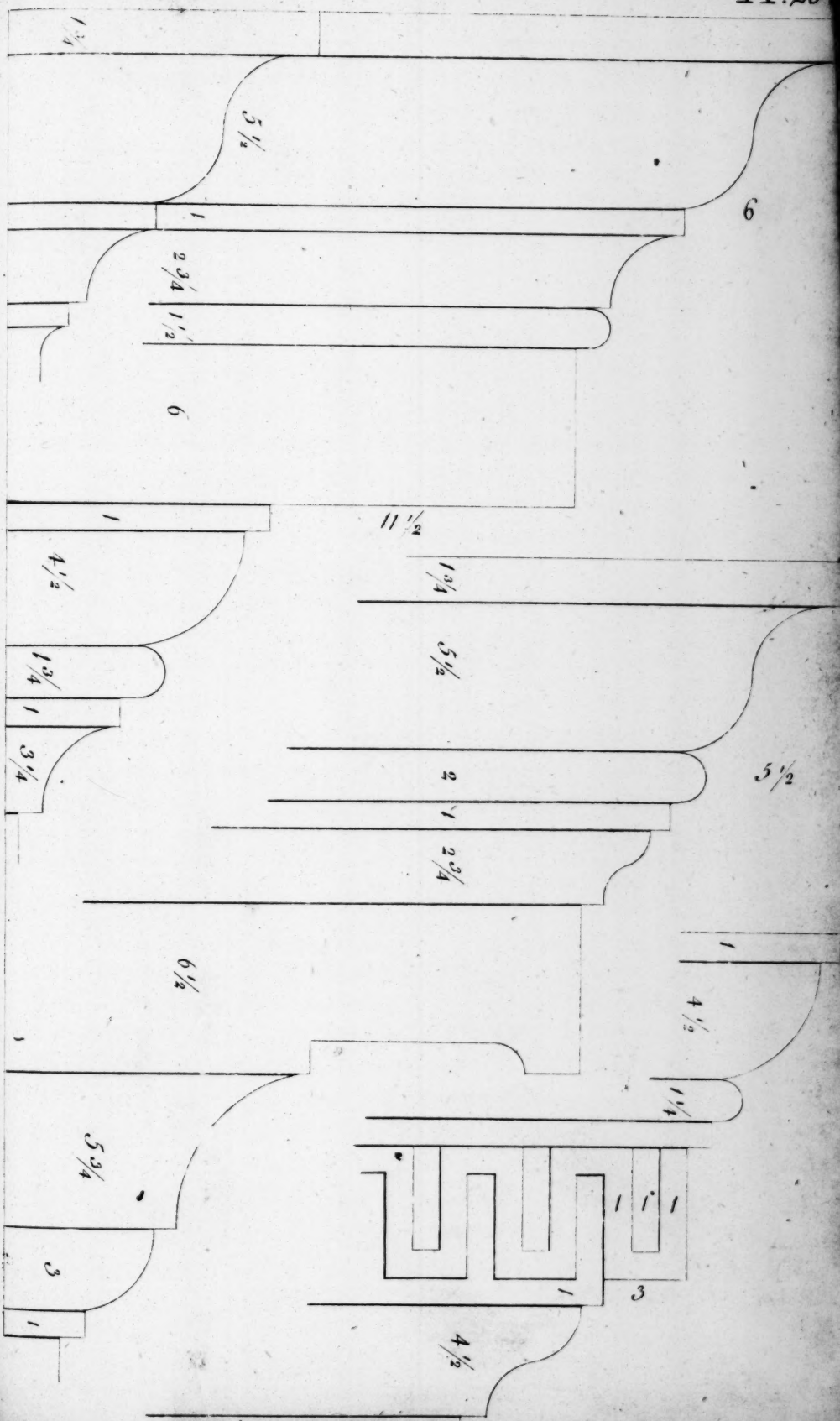




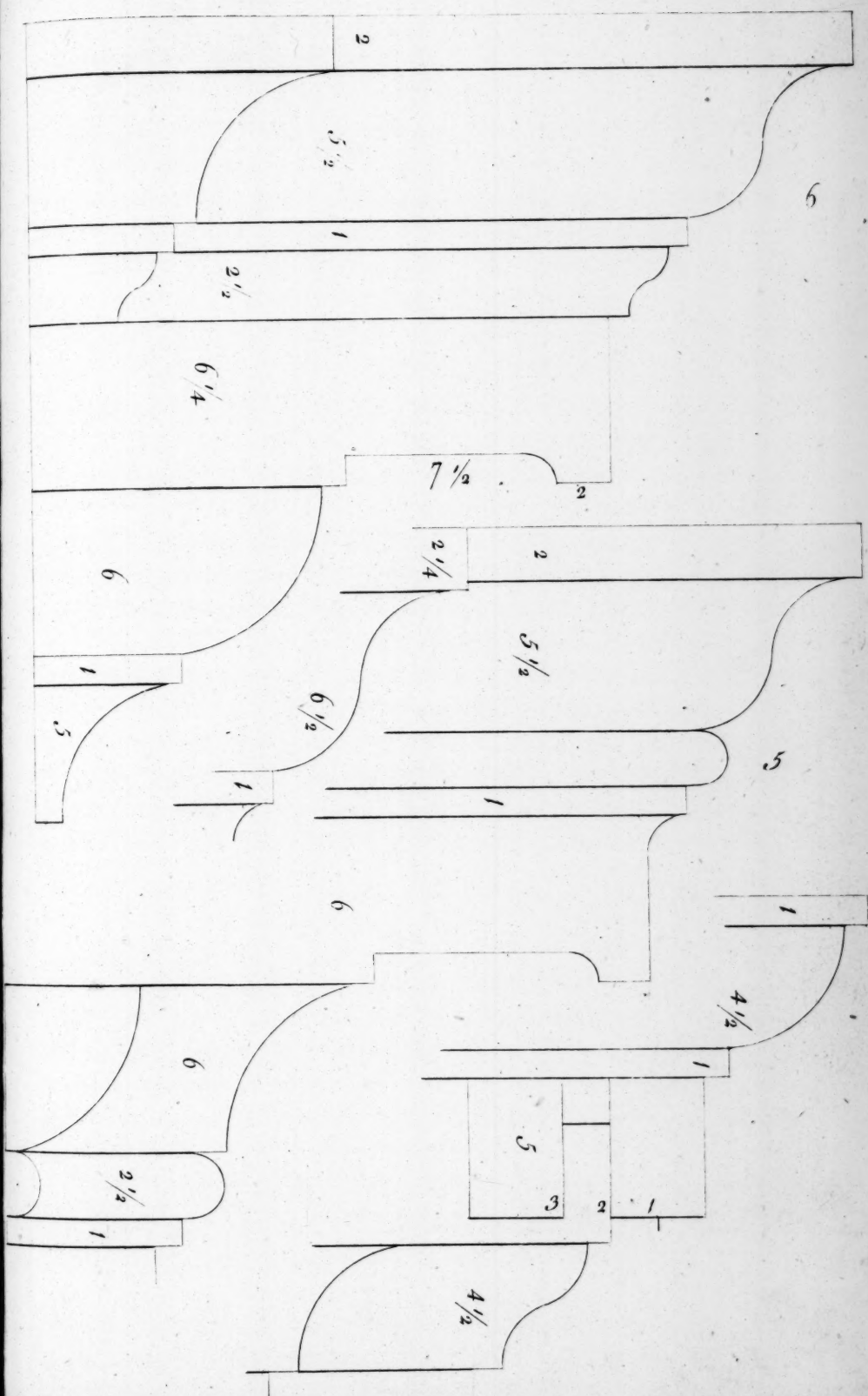




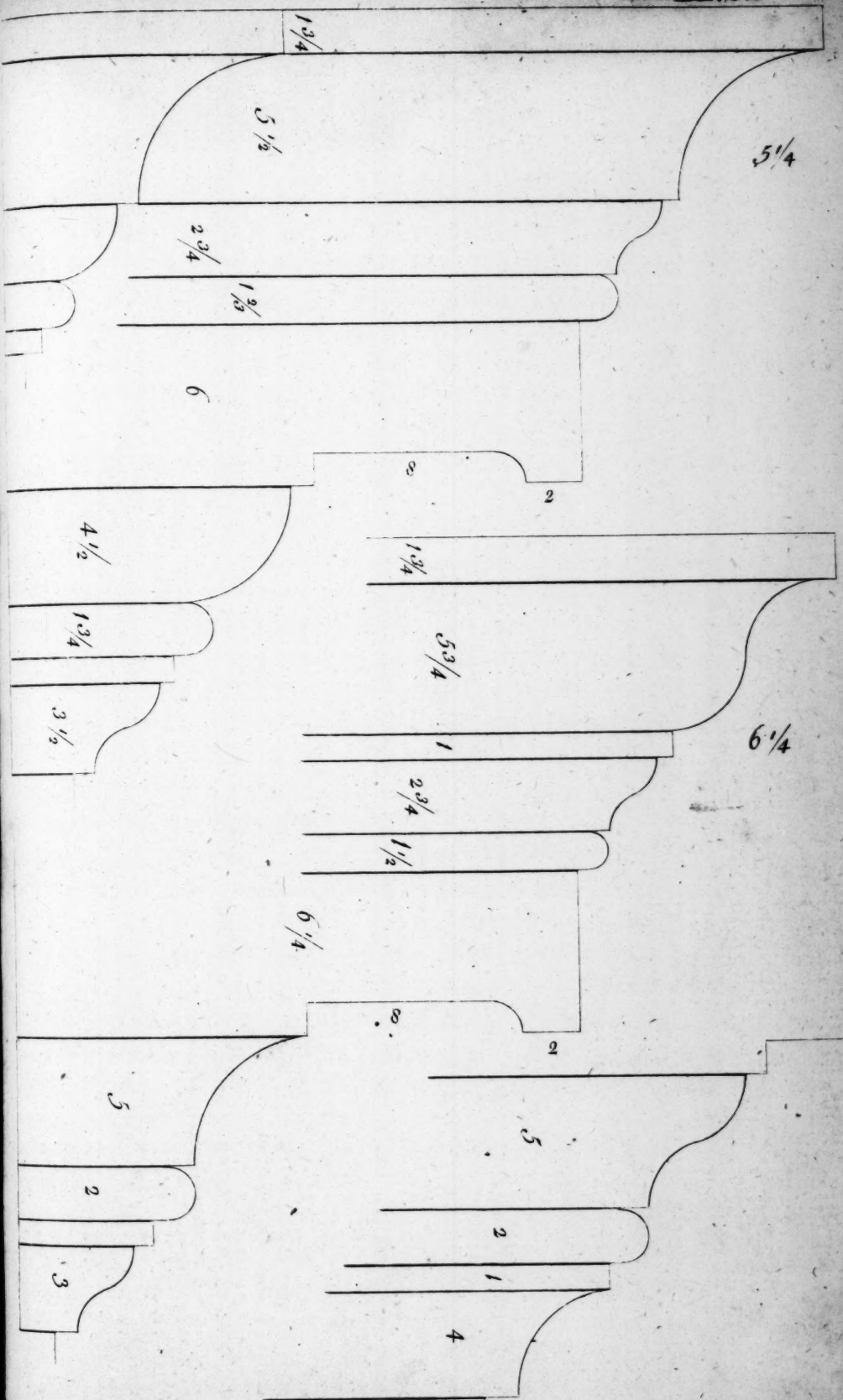




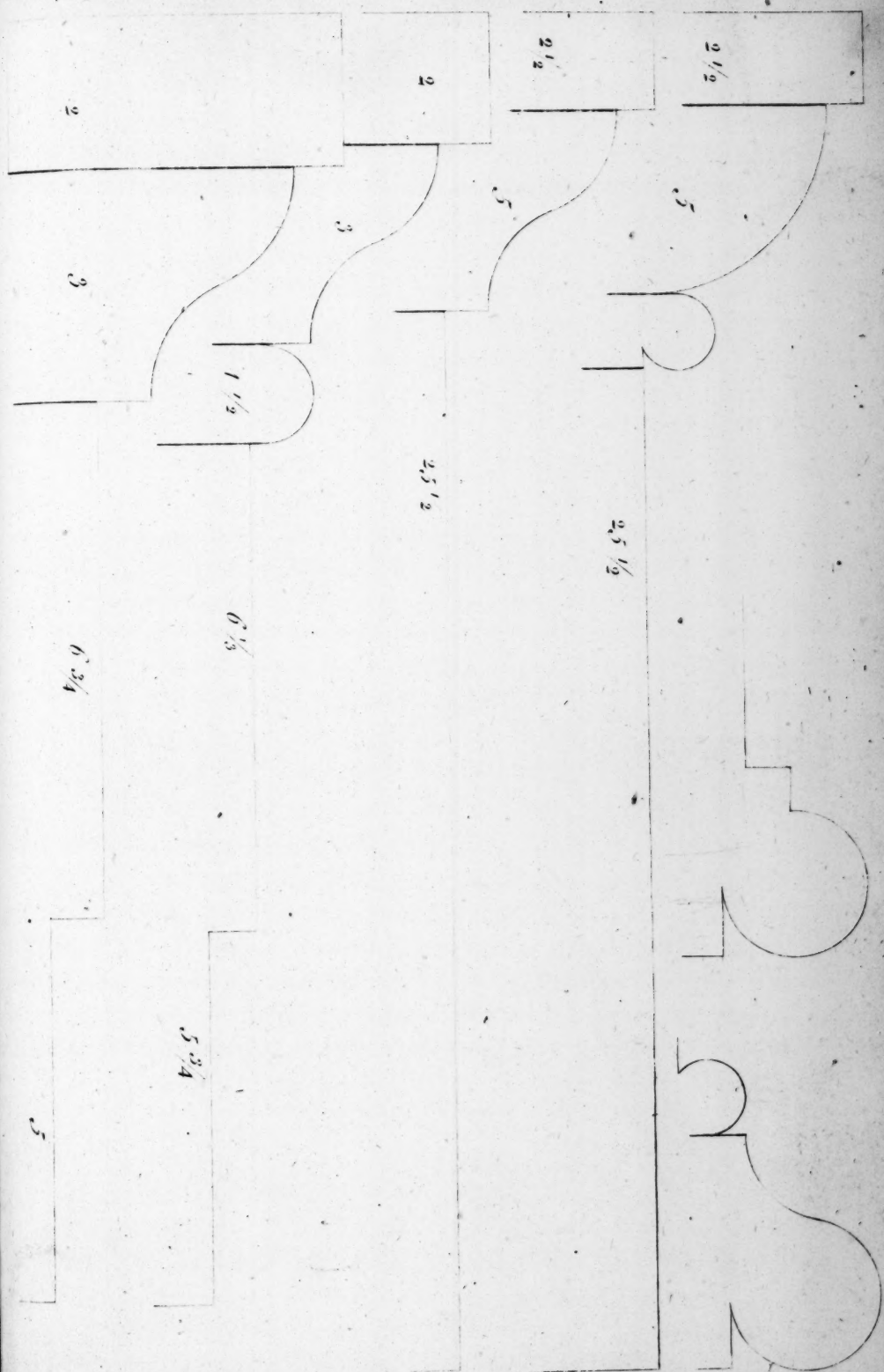


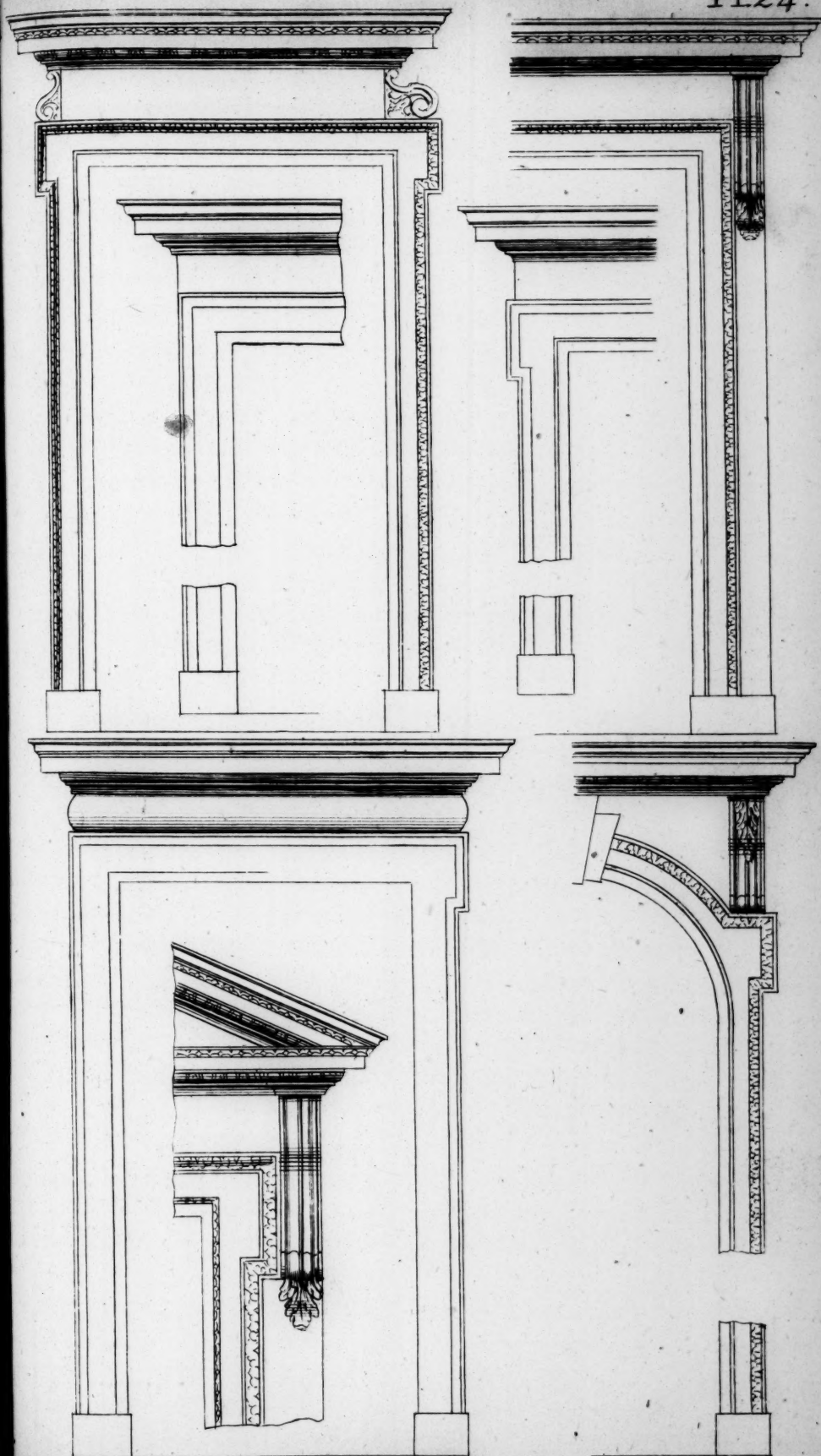




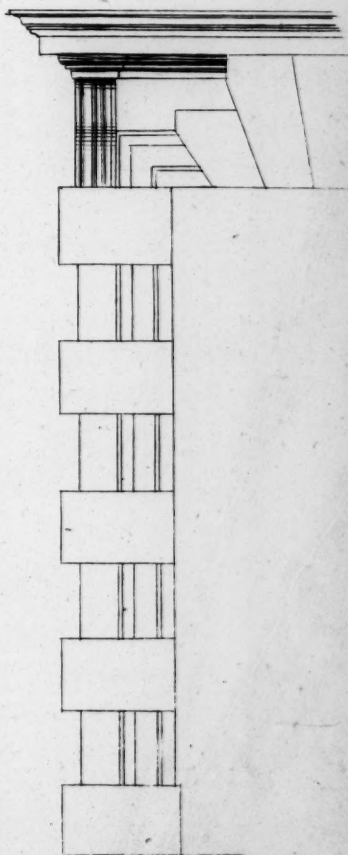
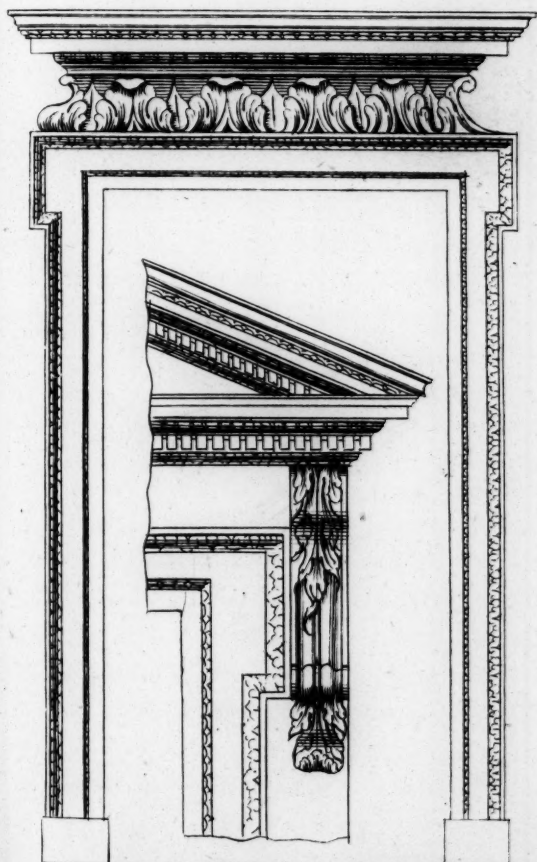
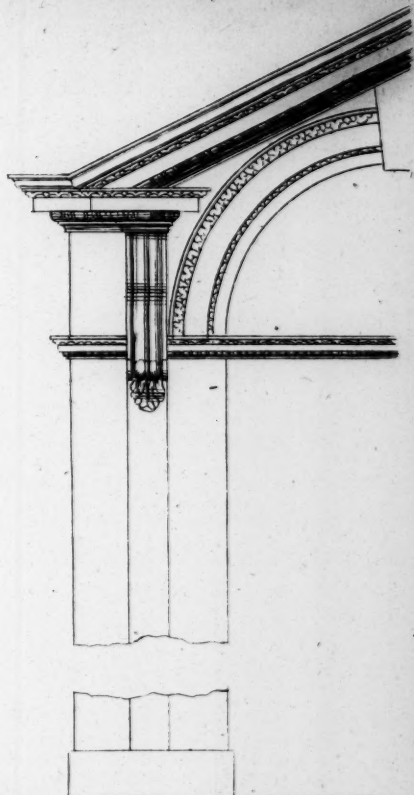
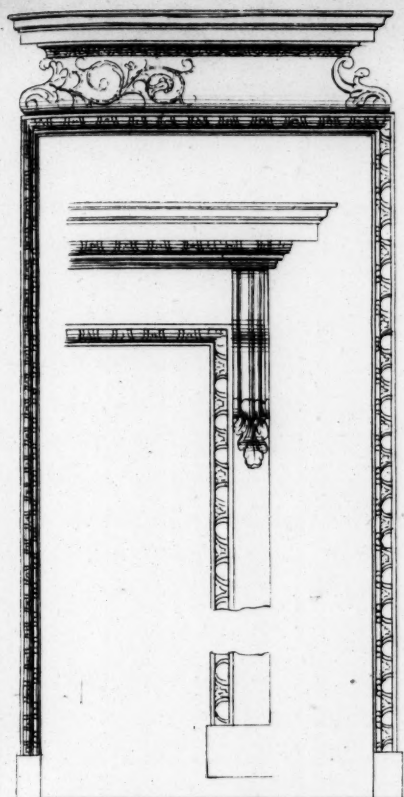












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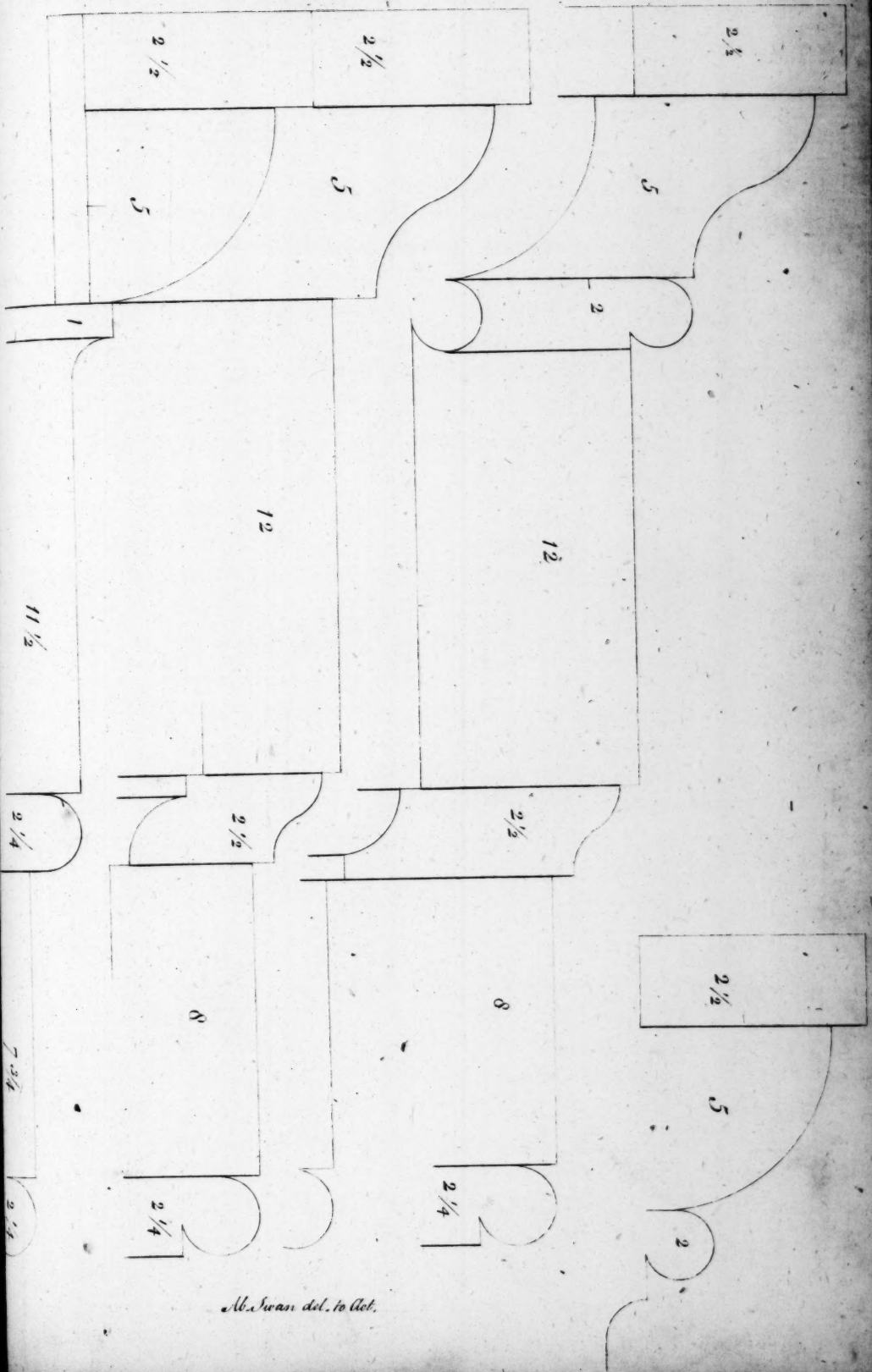


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2 1/4

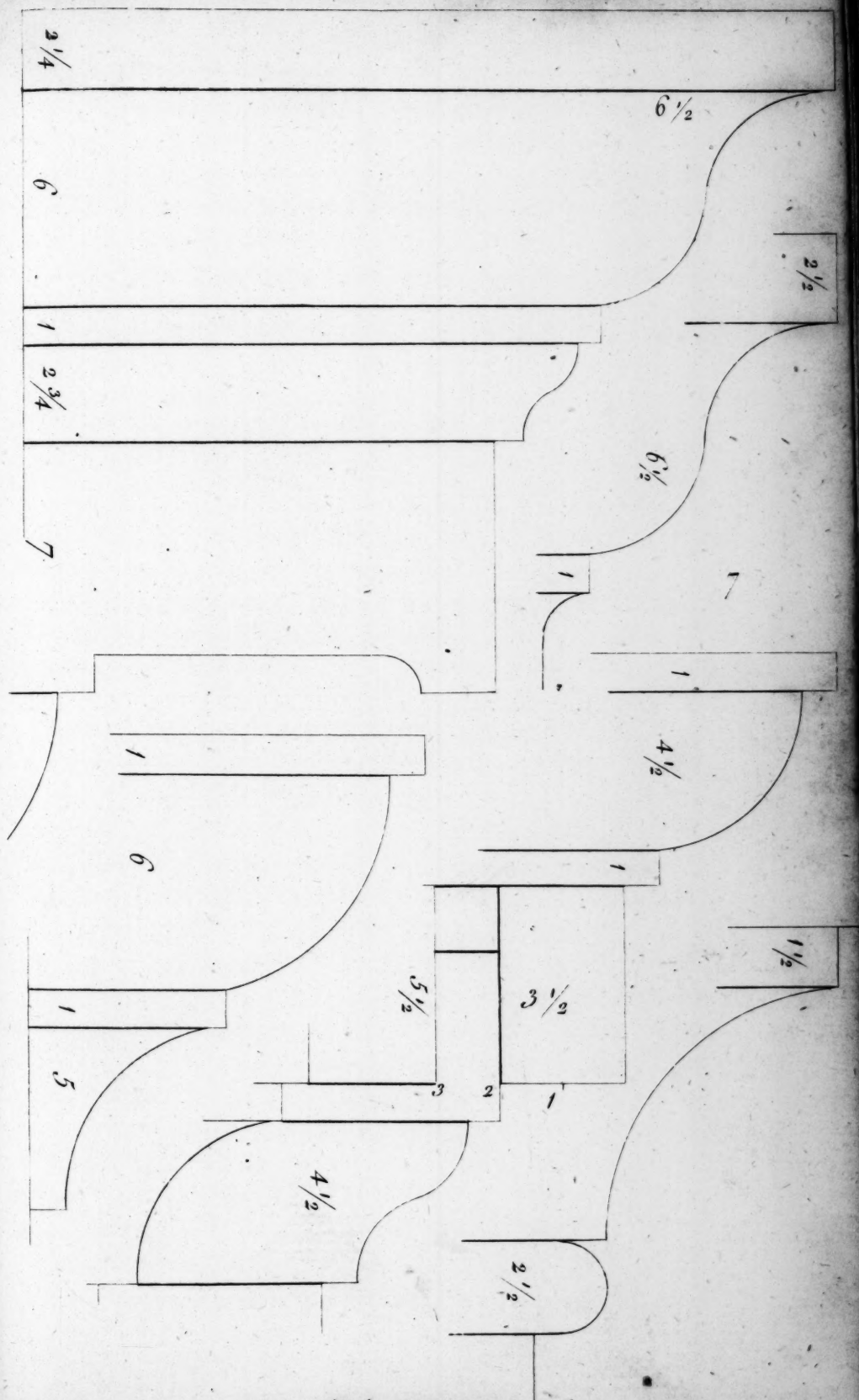
7 3/4

2 1/4



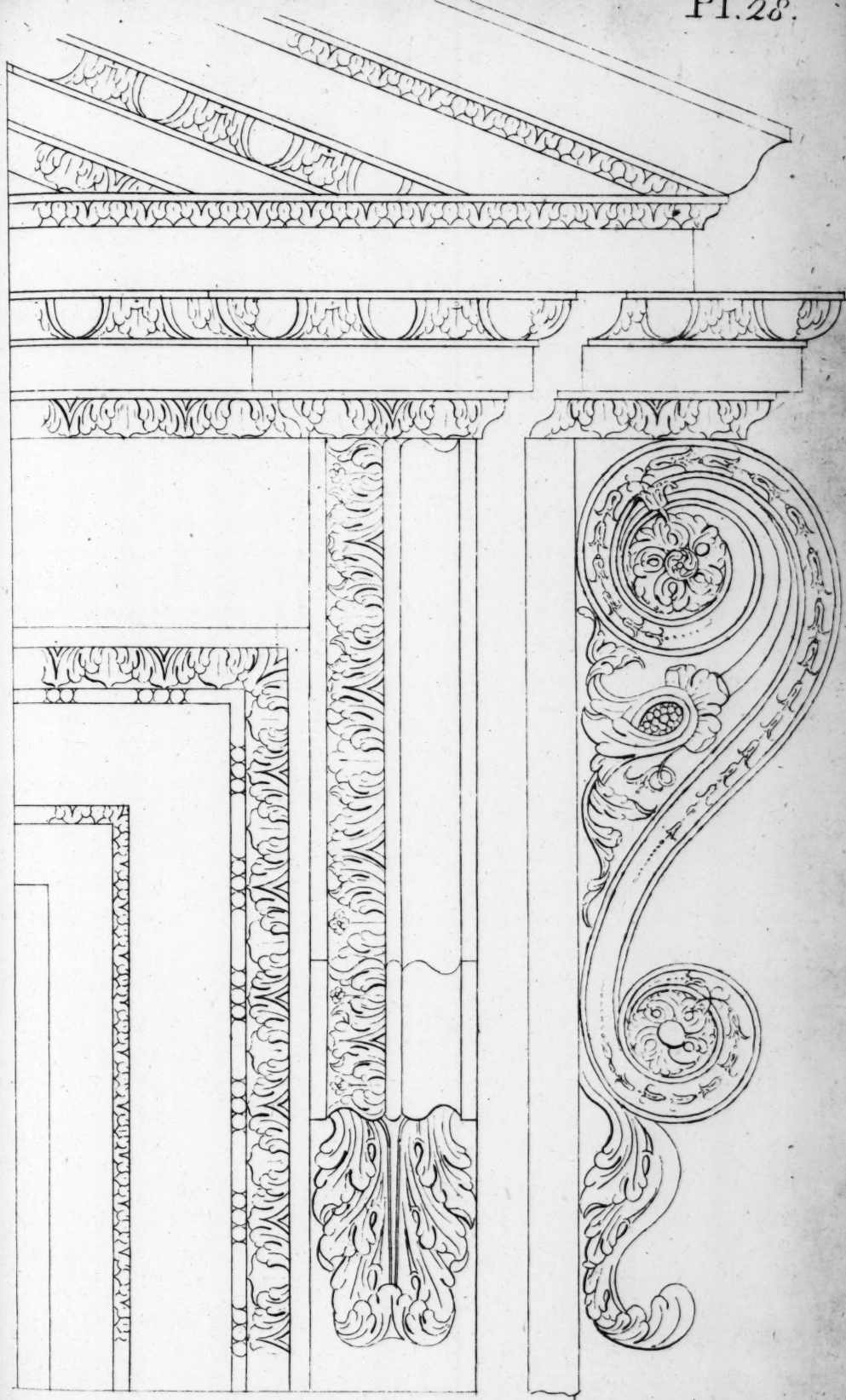
Mr. Swan del. to Act.



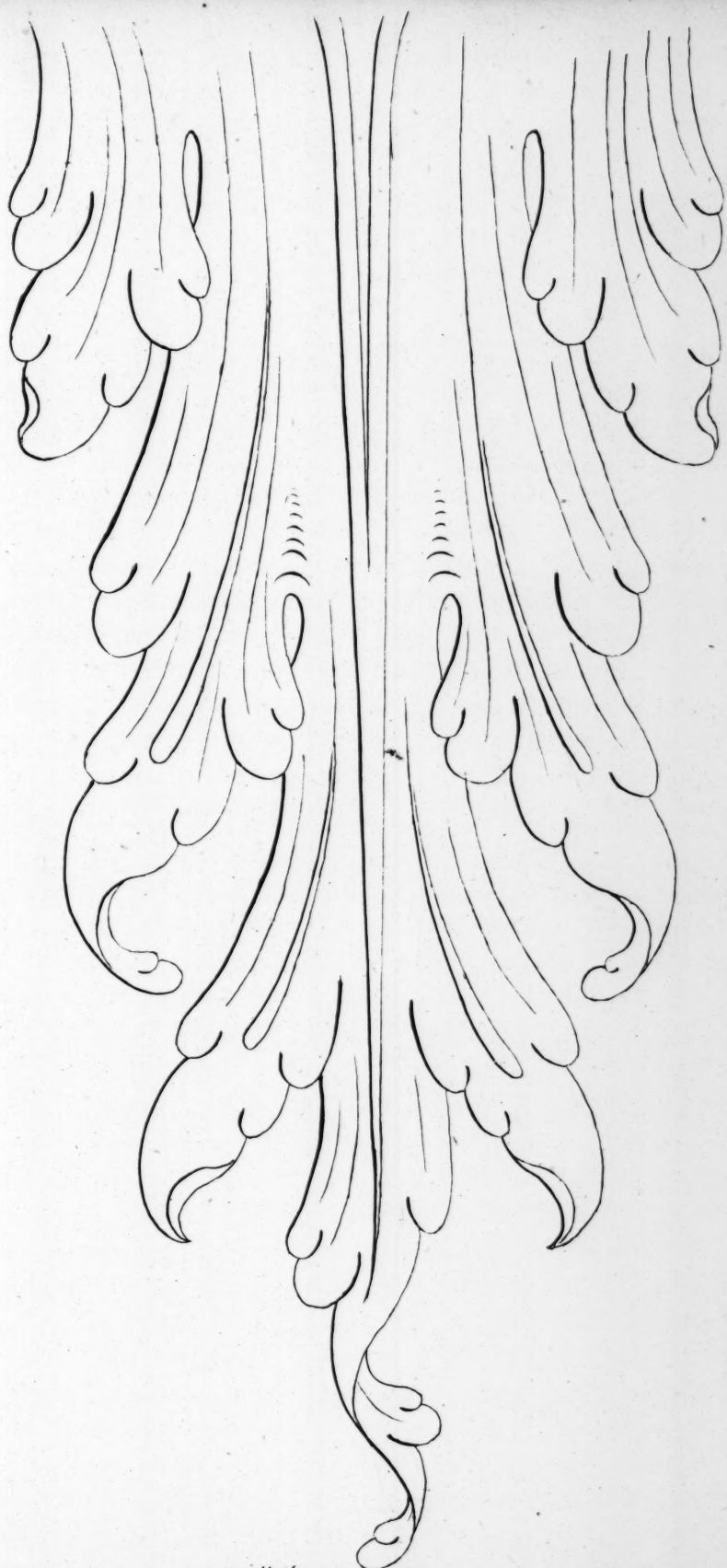


Ab. Swan del. to Act.

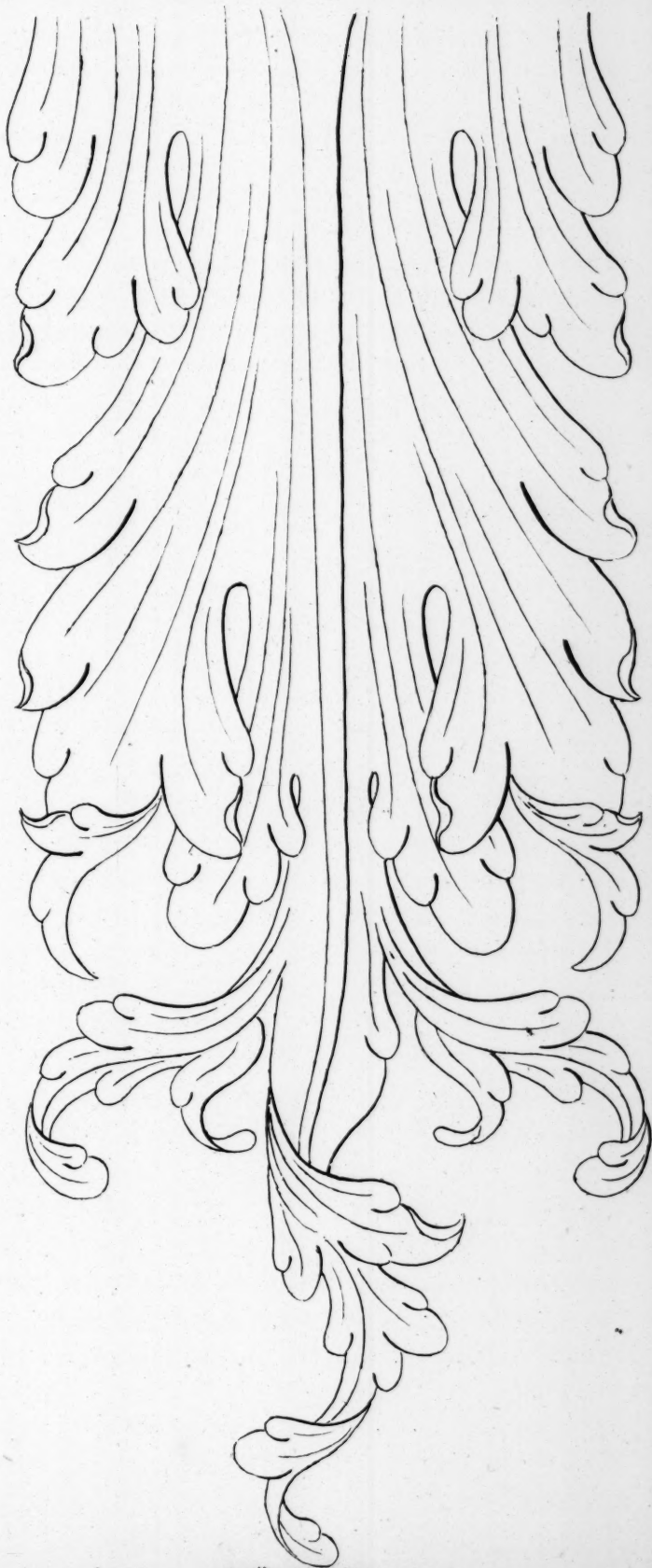




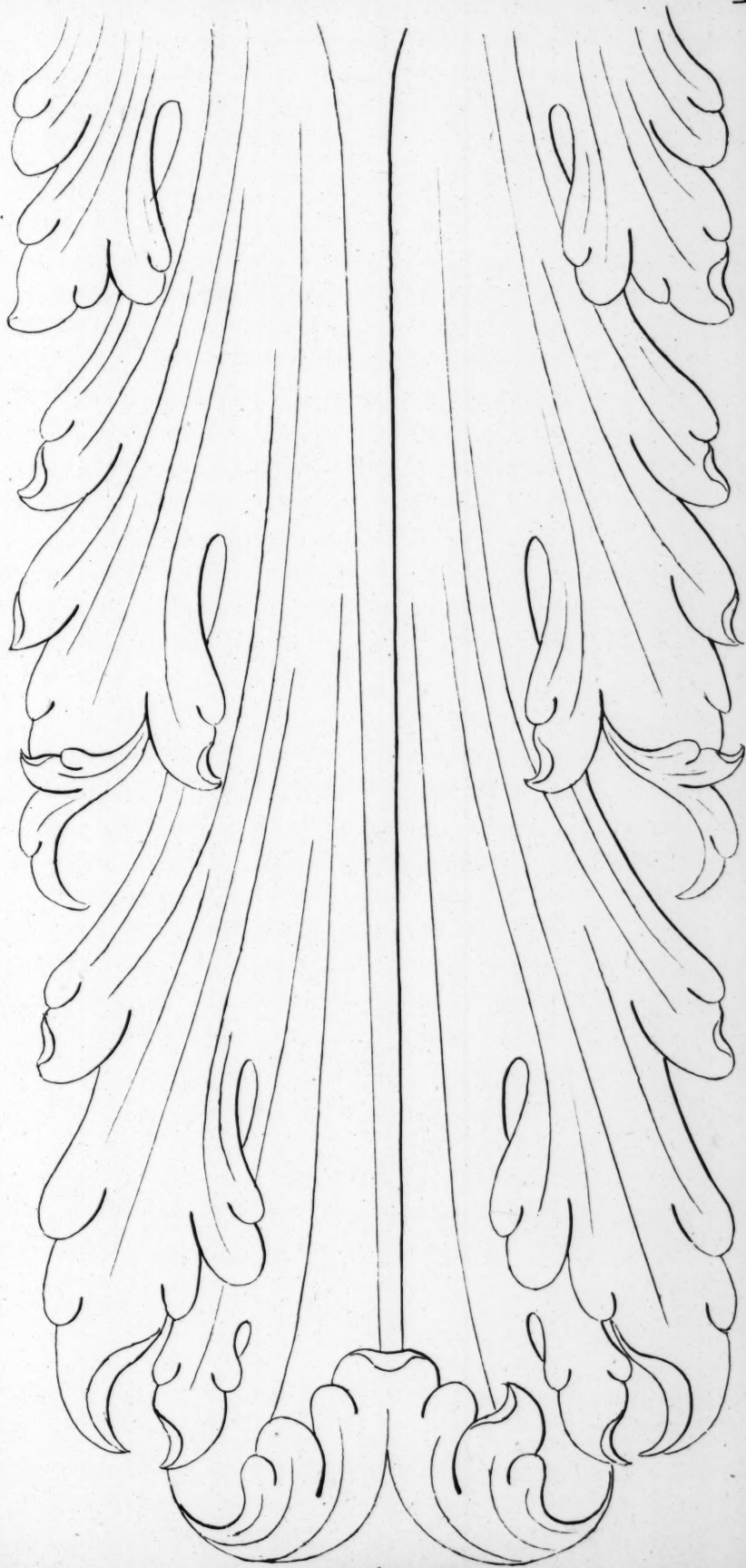




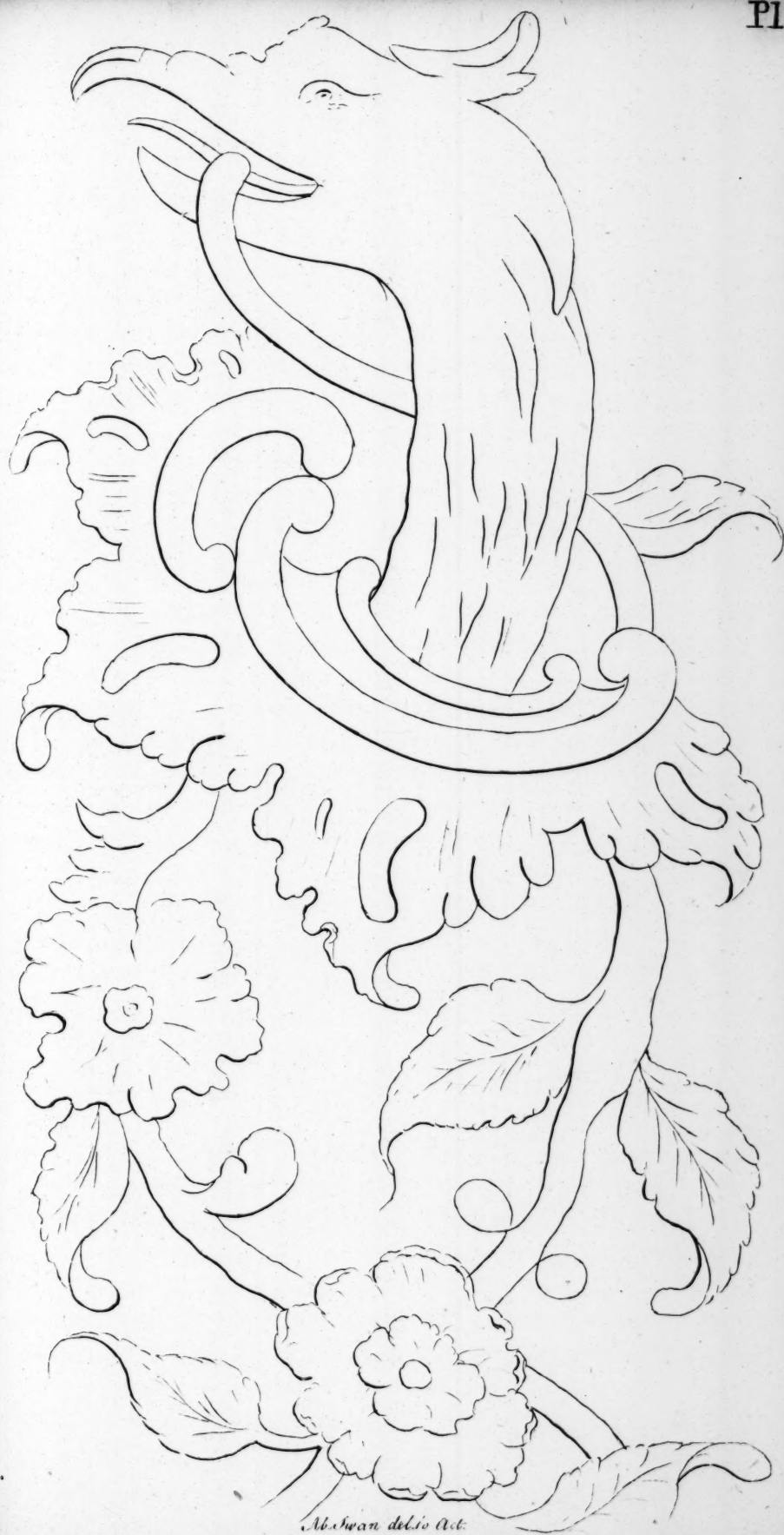




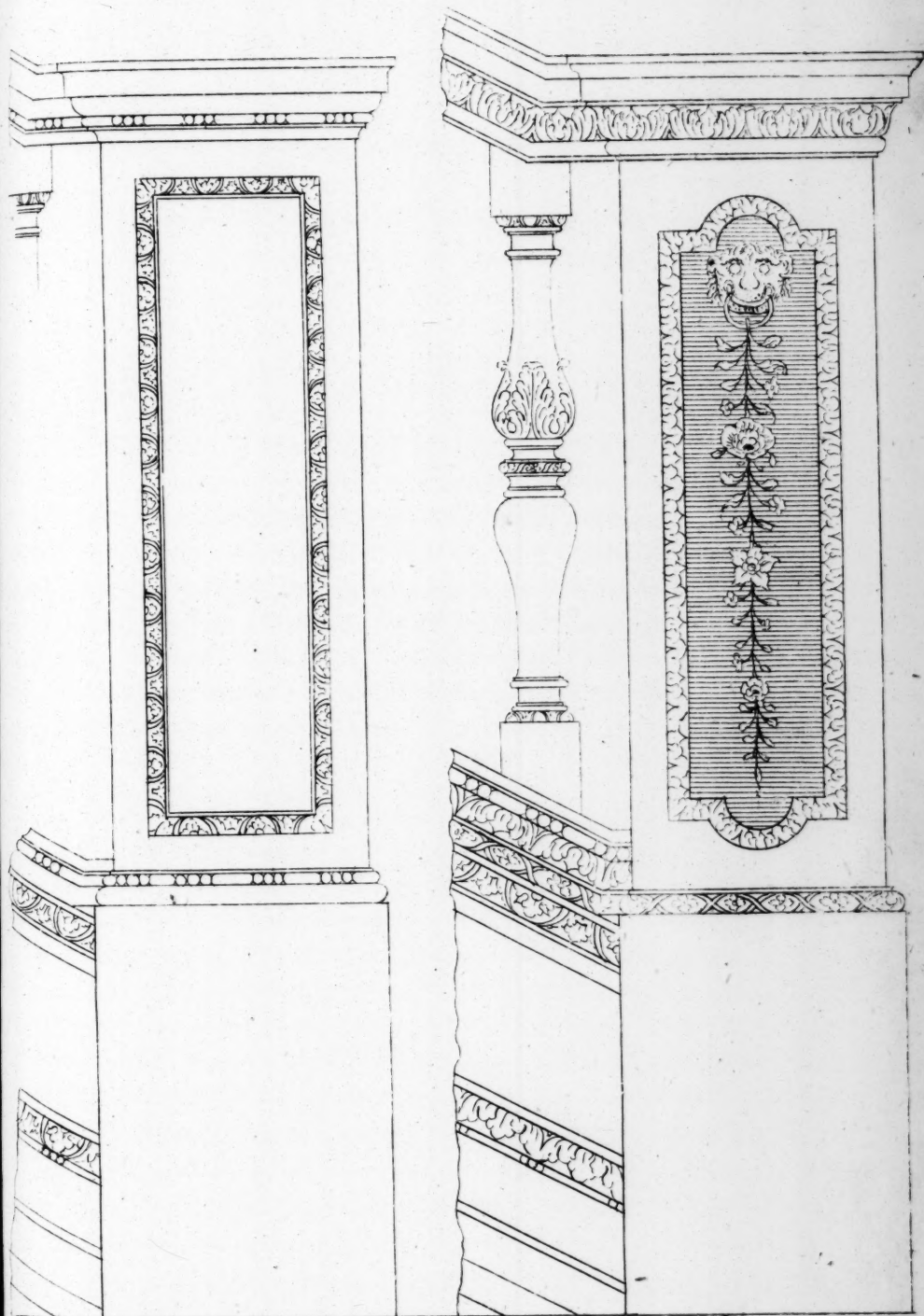




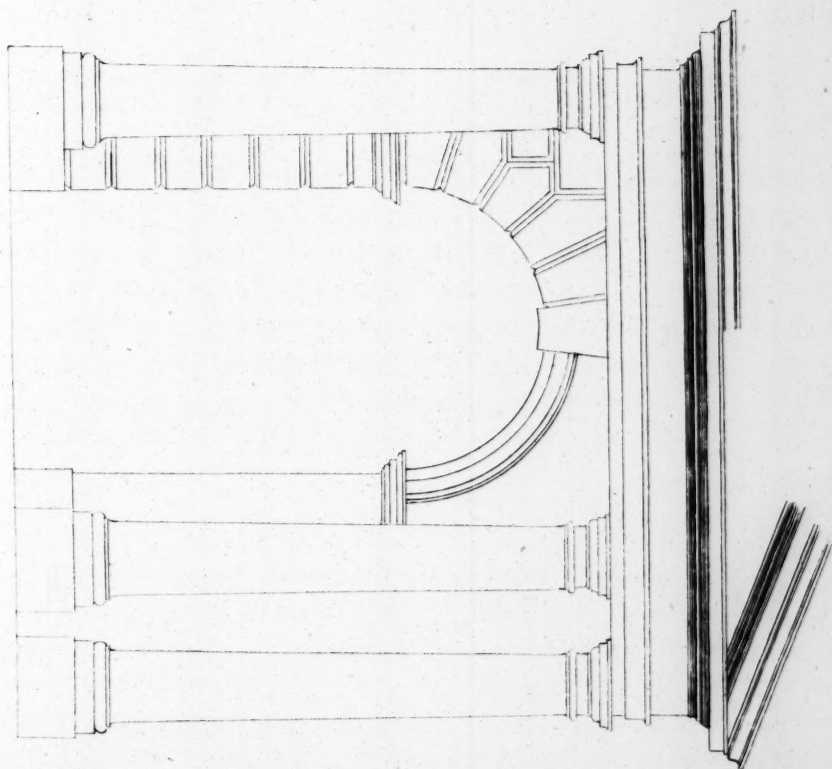
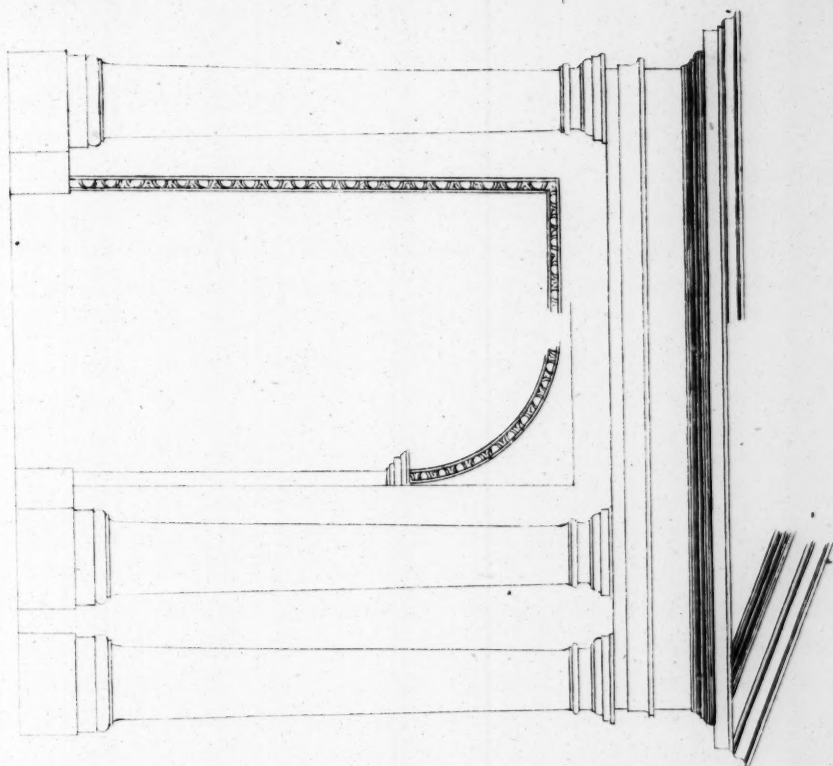






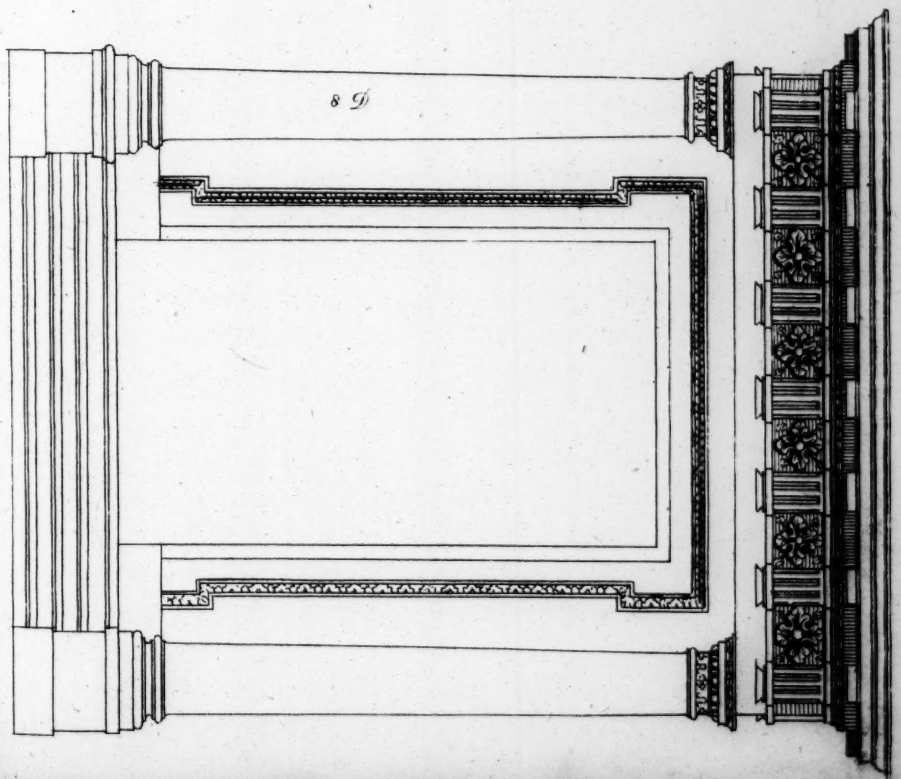
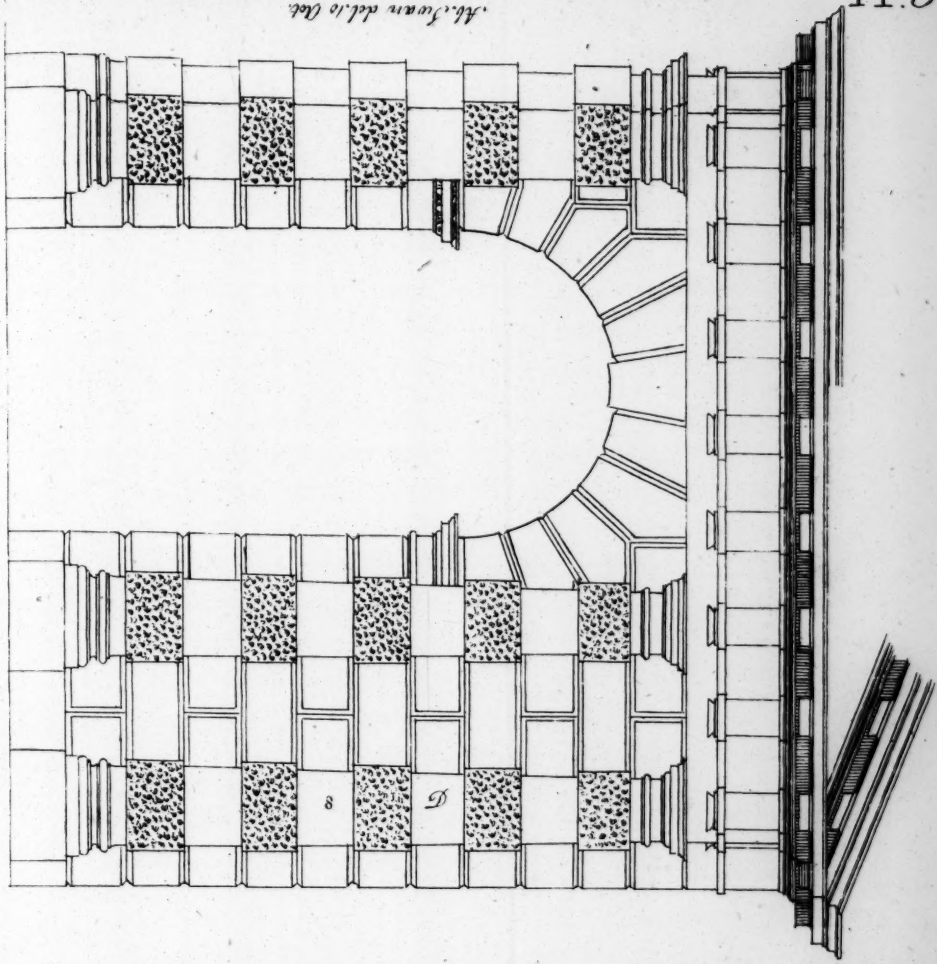




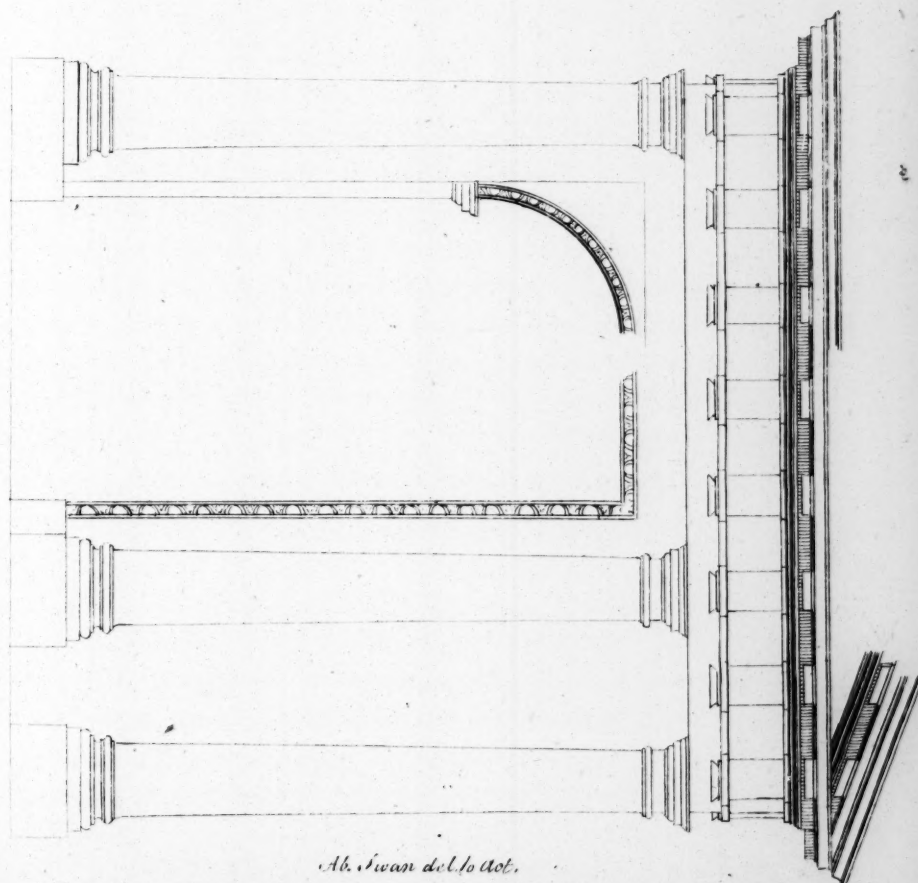
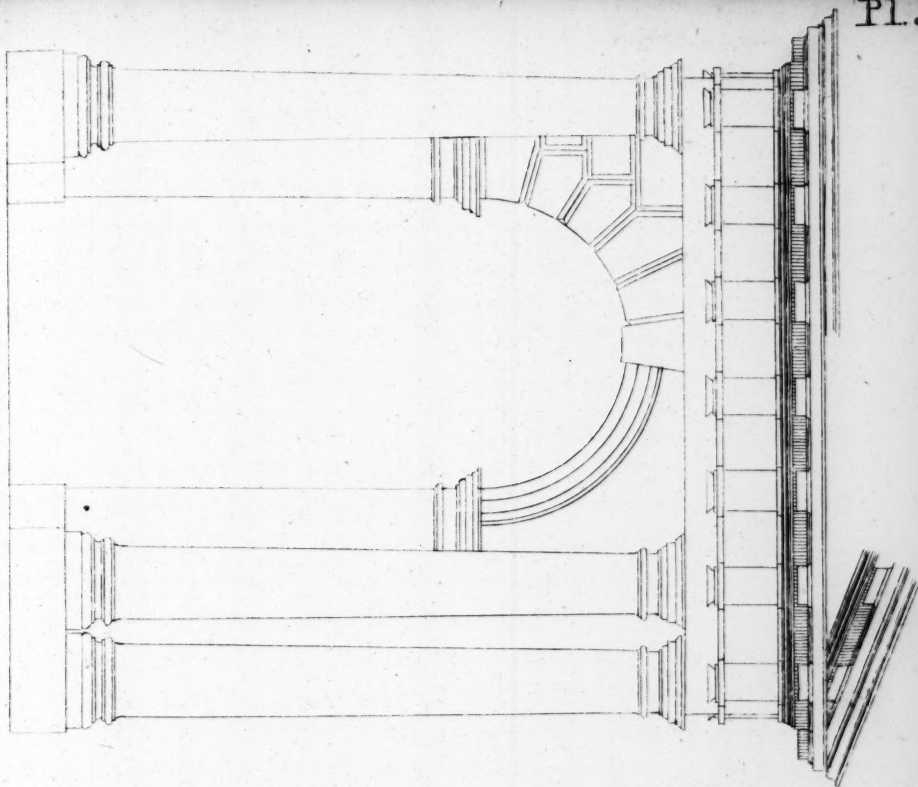




Ab. J. van der Aalst

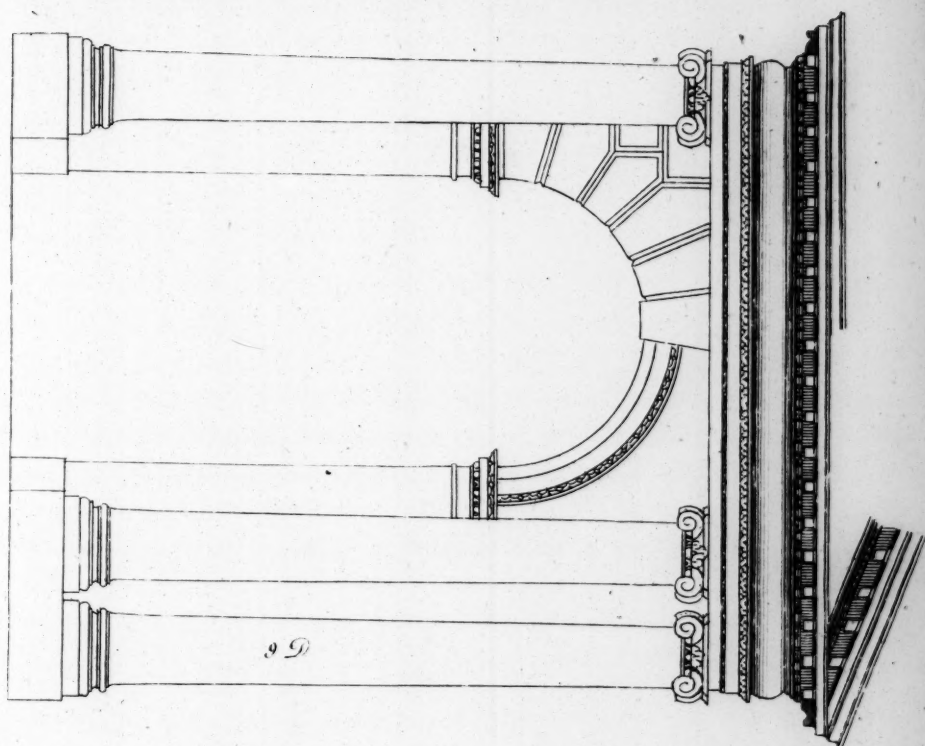




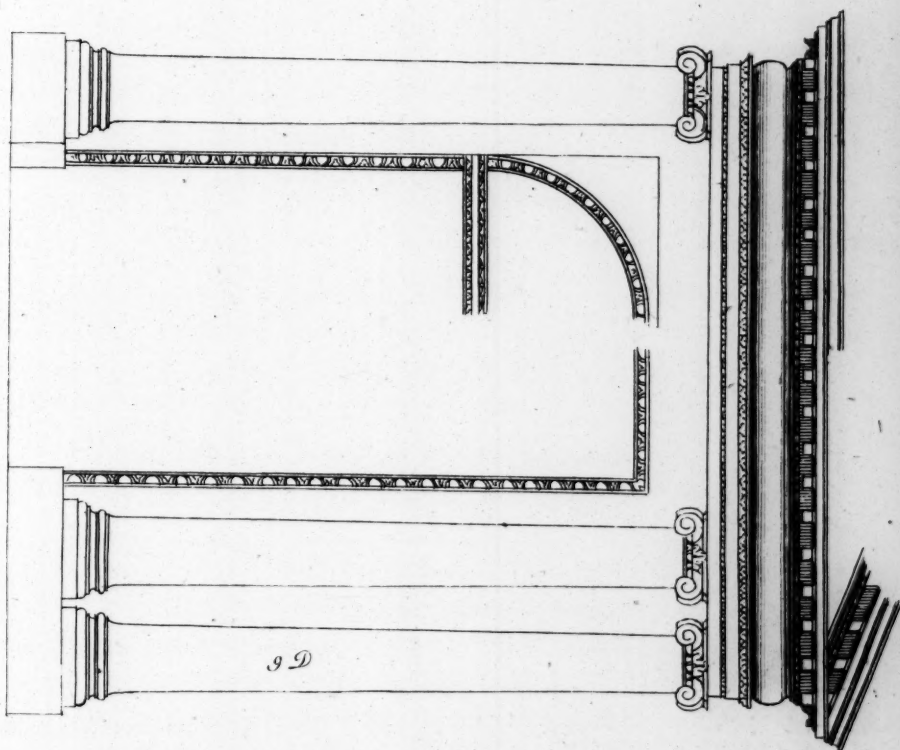


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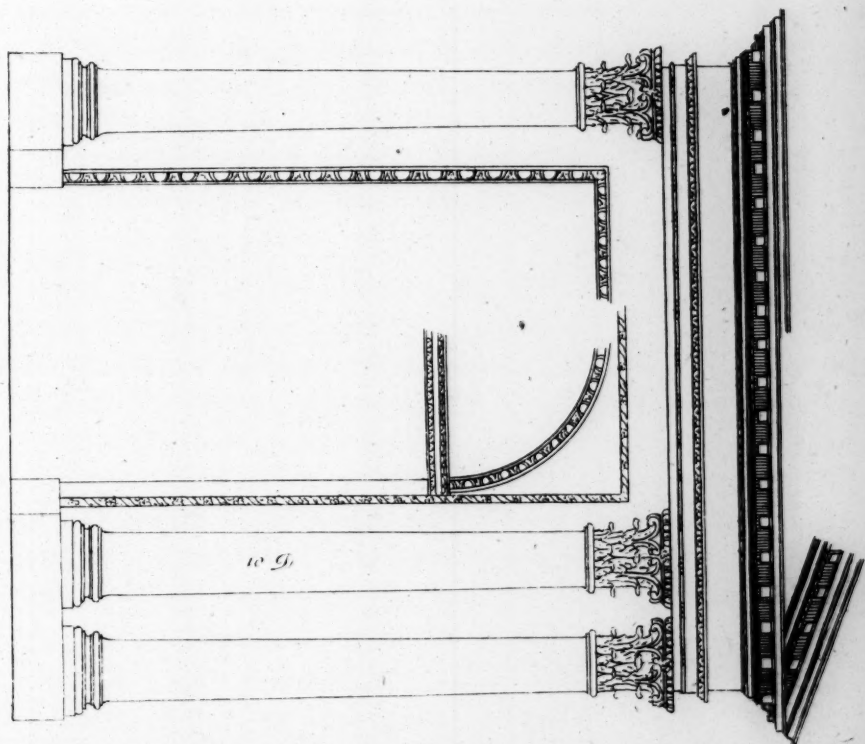
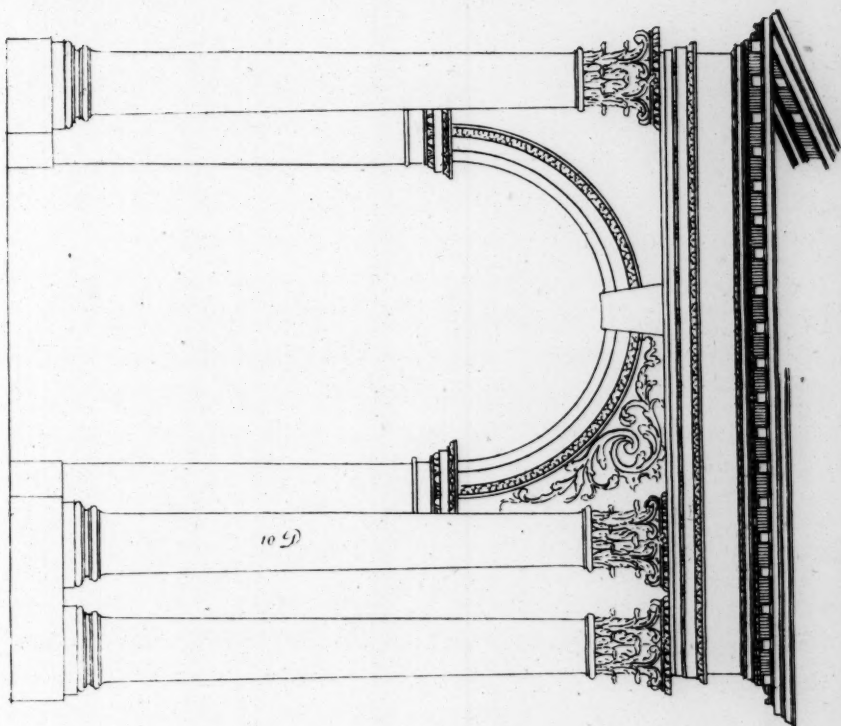


9 D

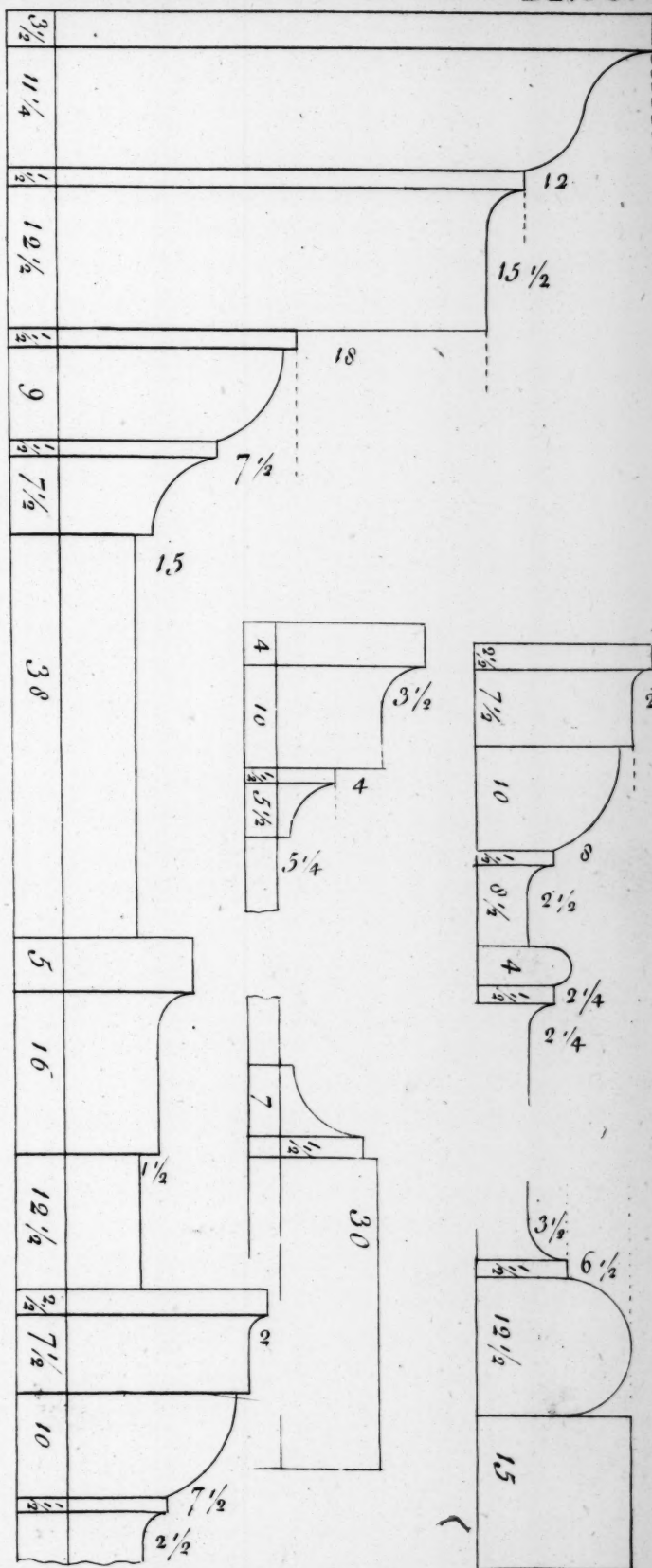
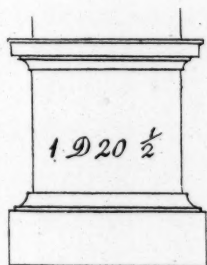


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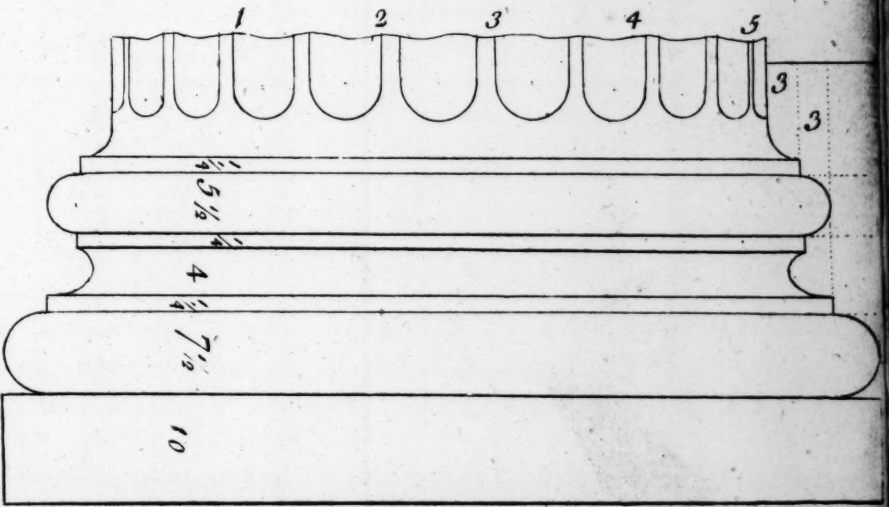
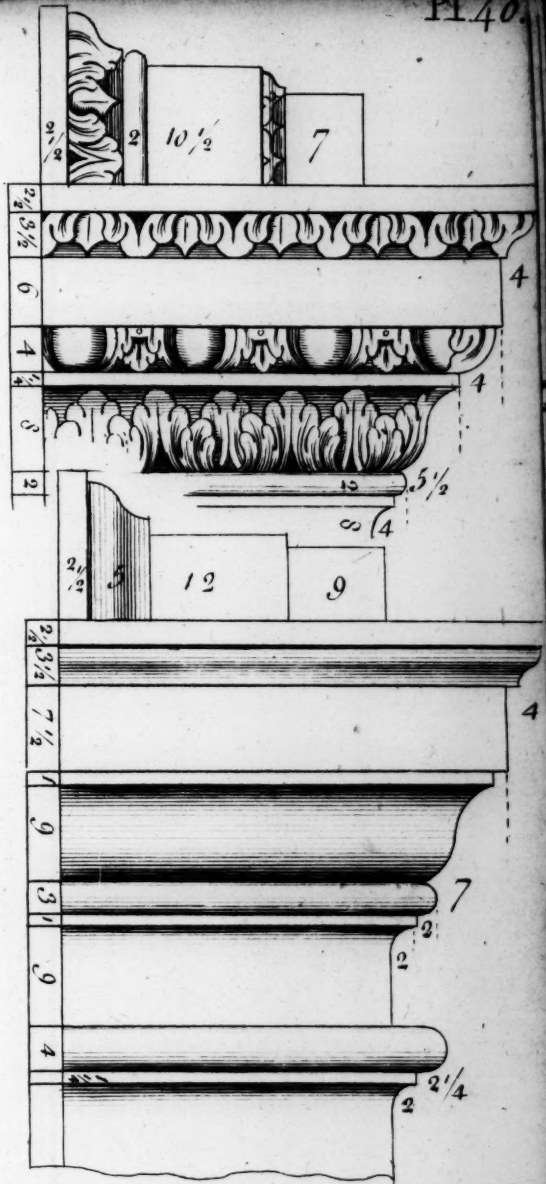
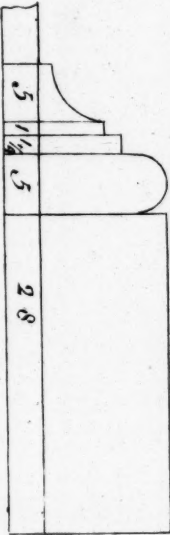
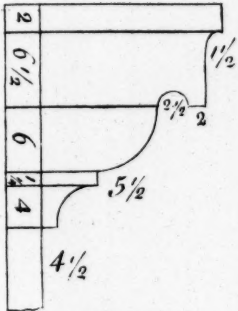
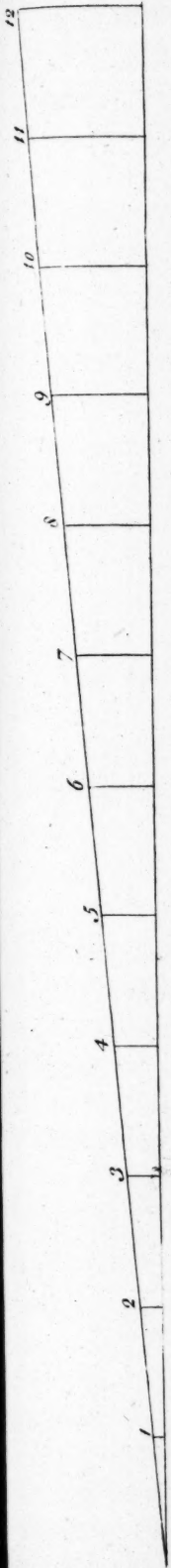




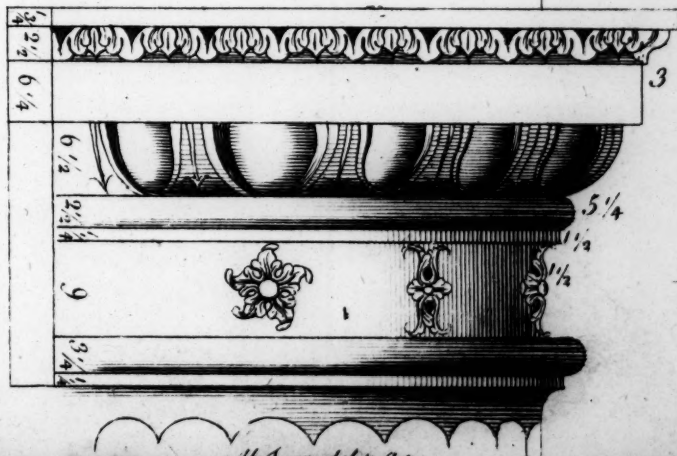
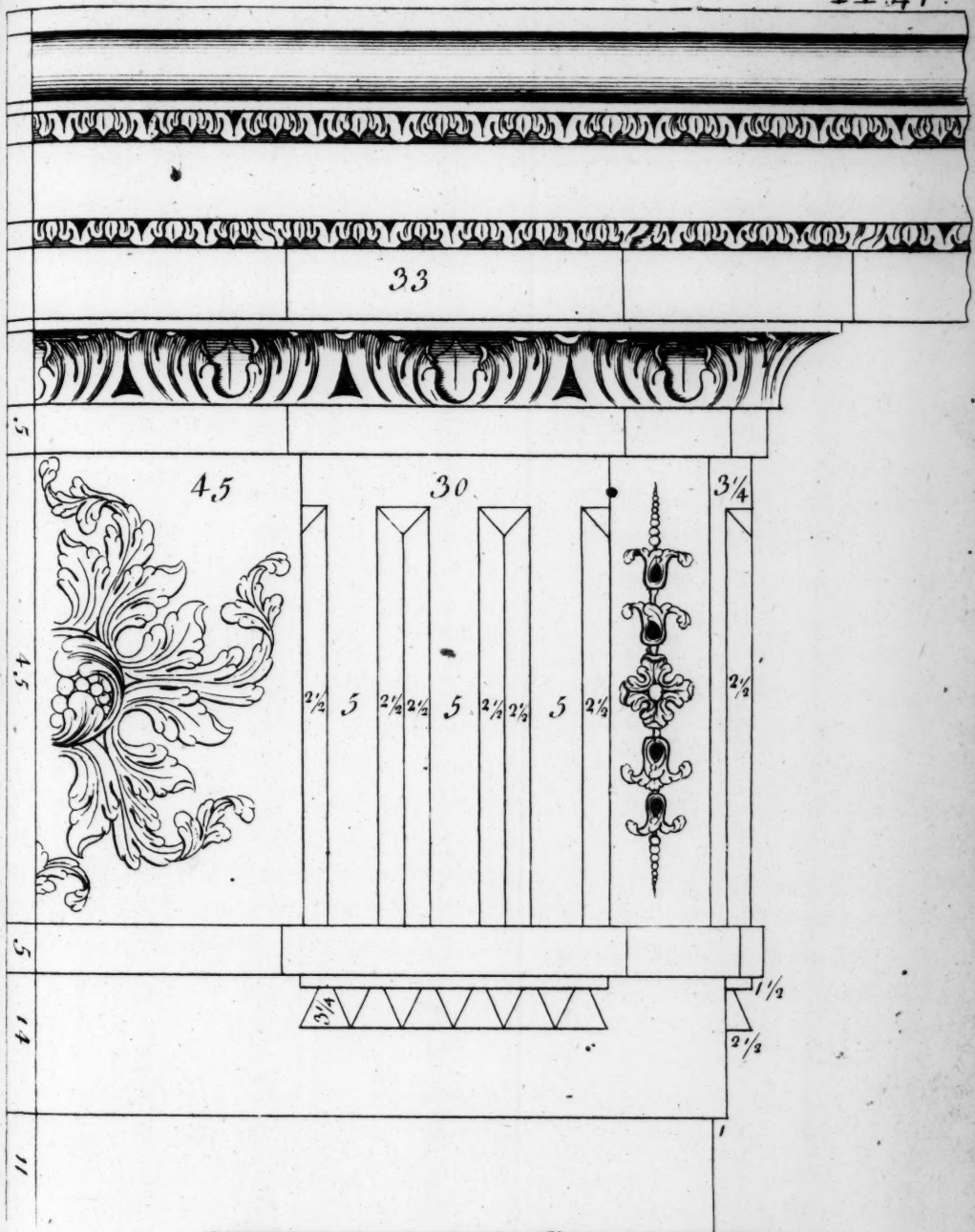




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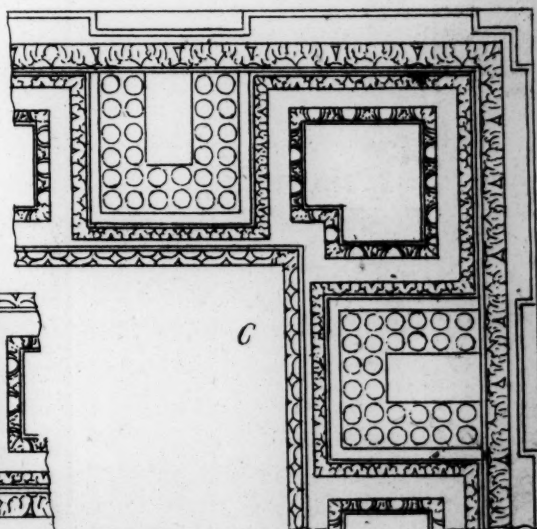
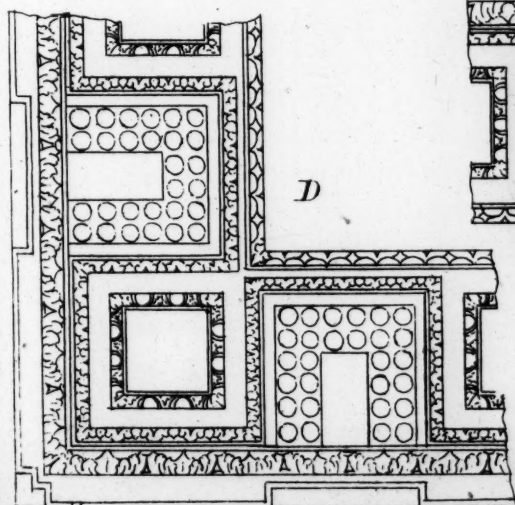
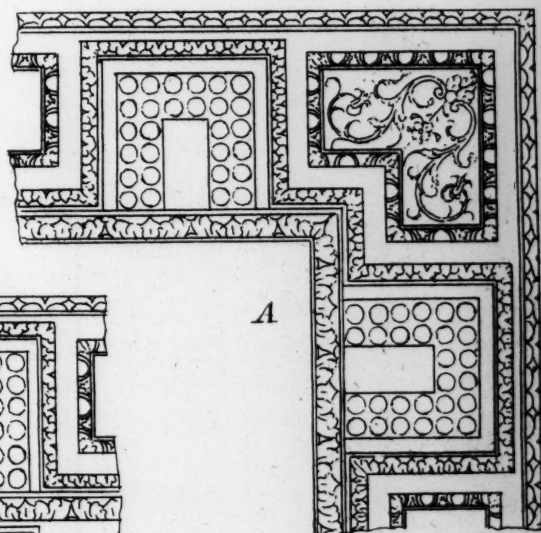
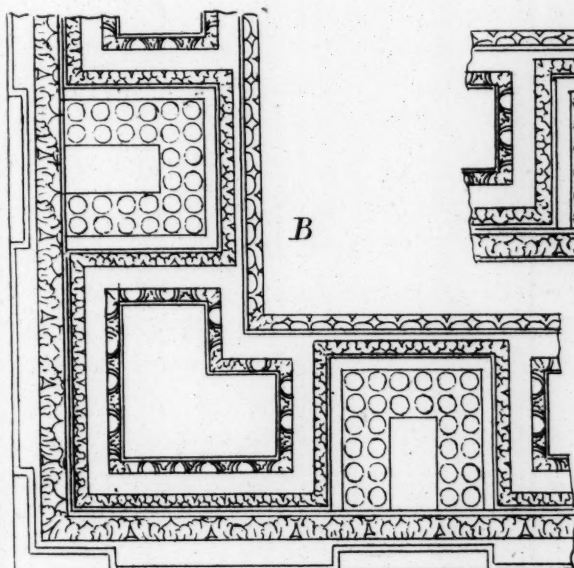
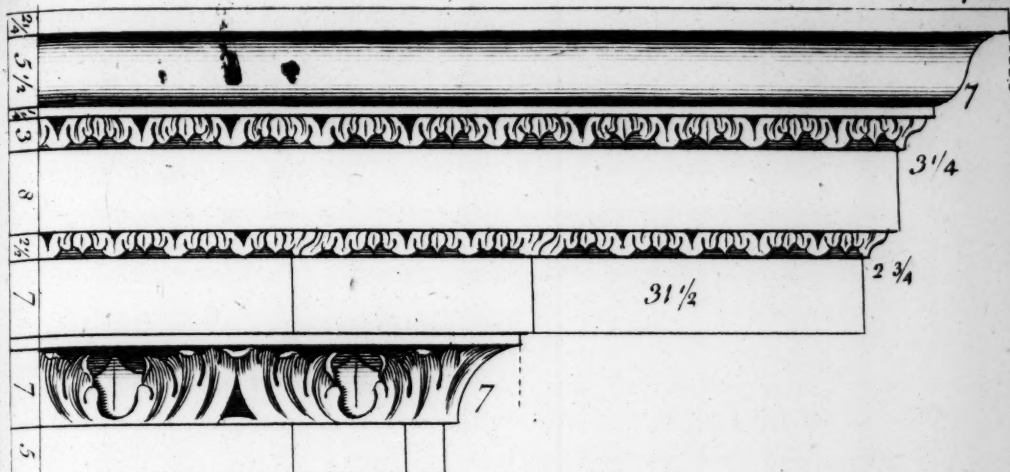
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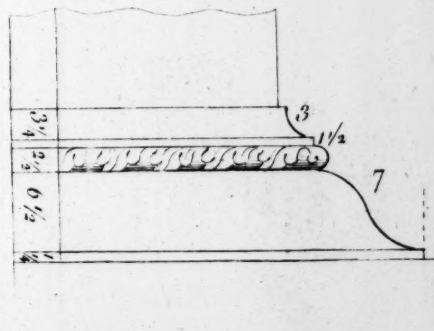
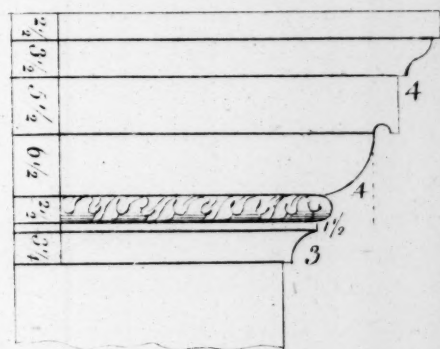
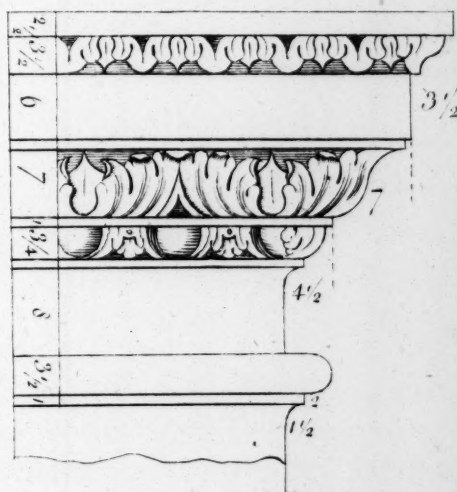
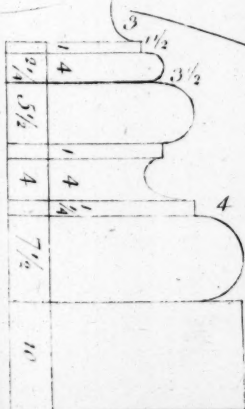
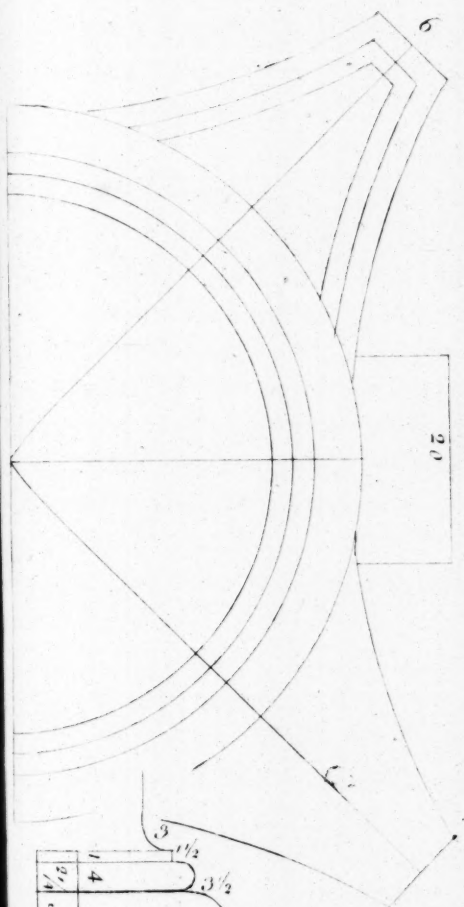
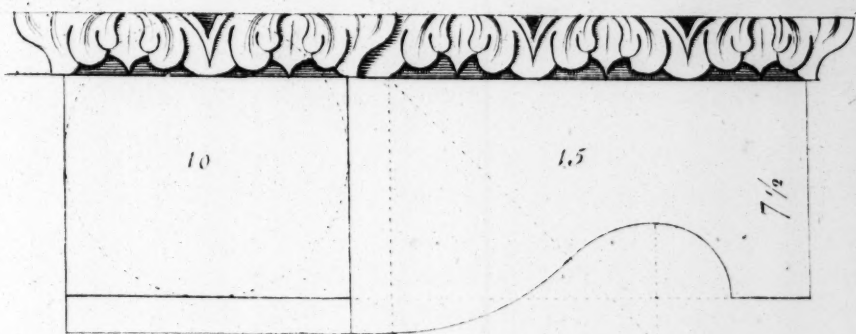
8

29	4
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2	1/2
7	7
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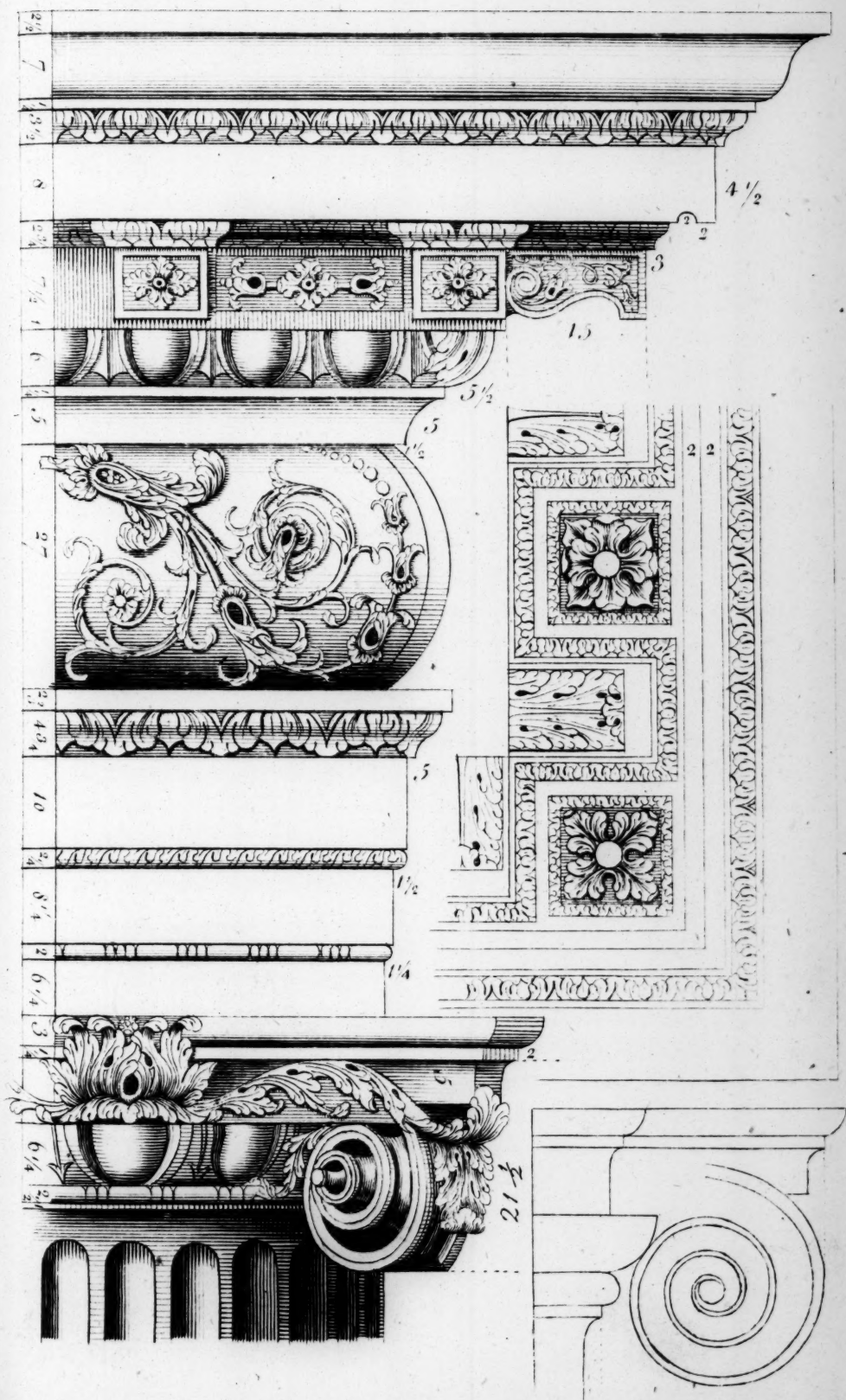






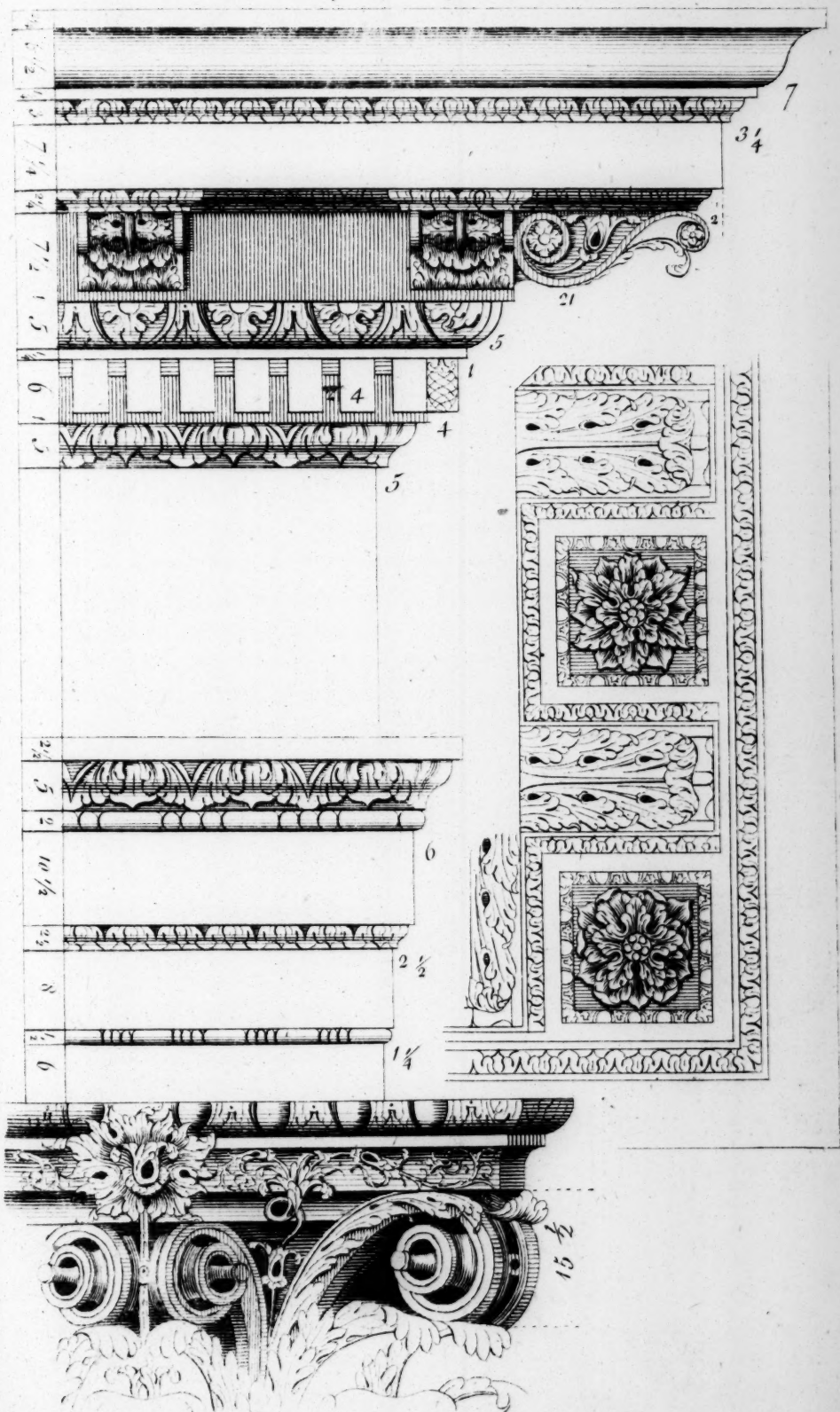




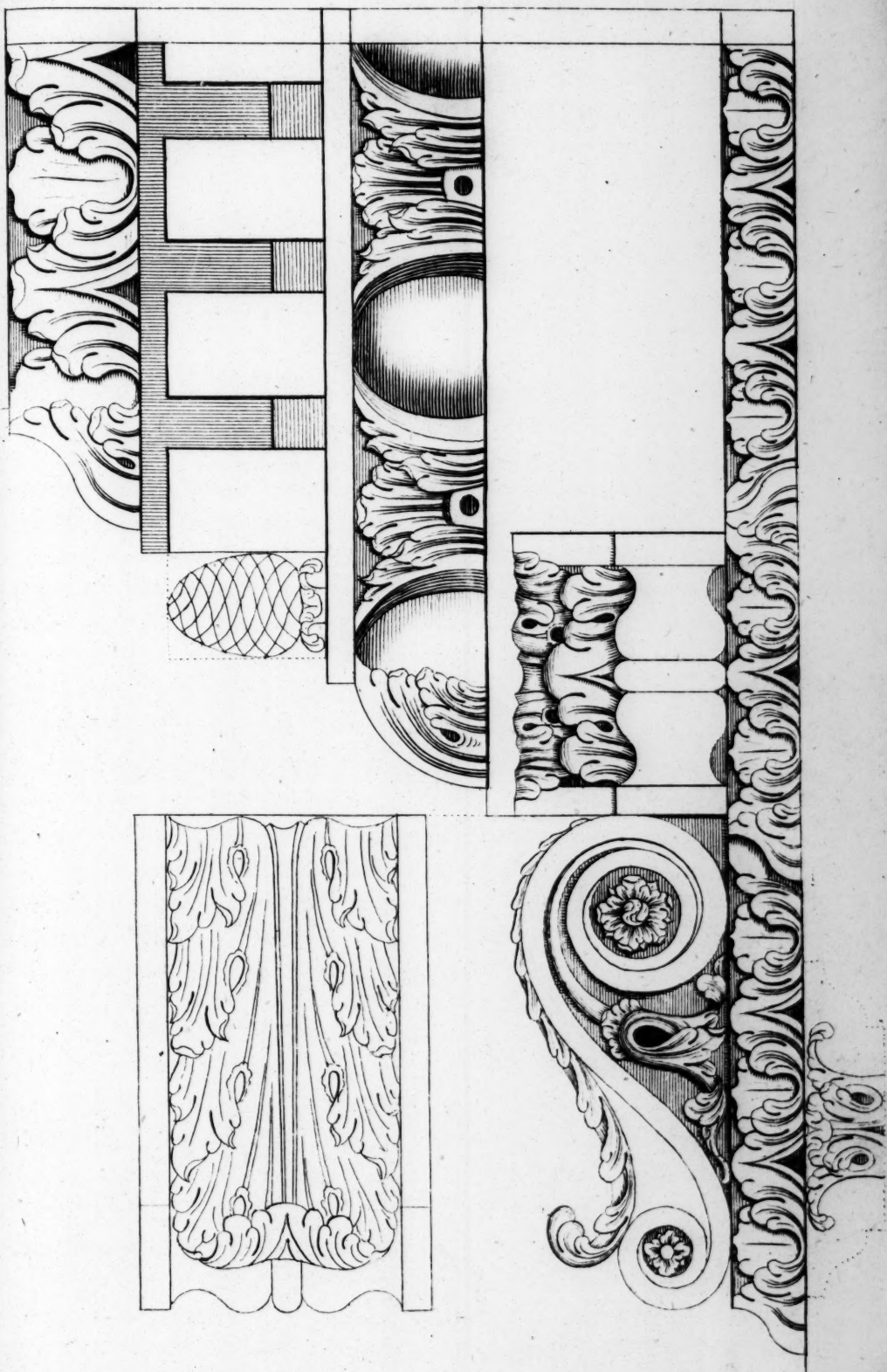




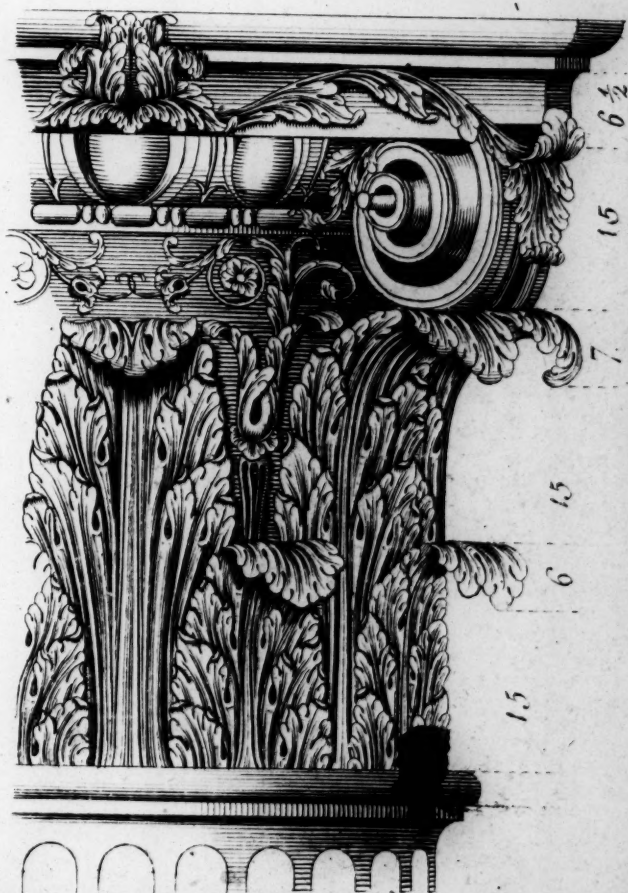
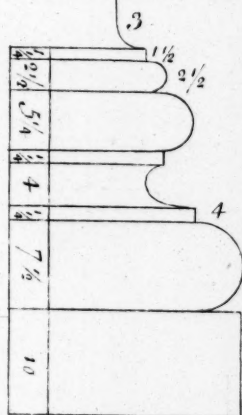
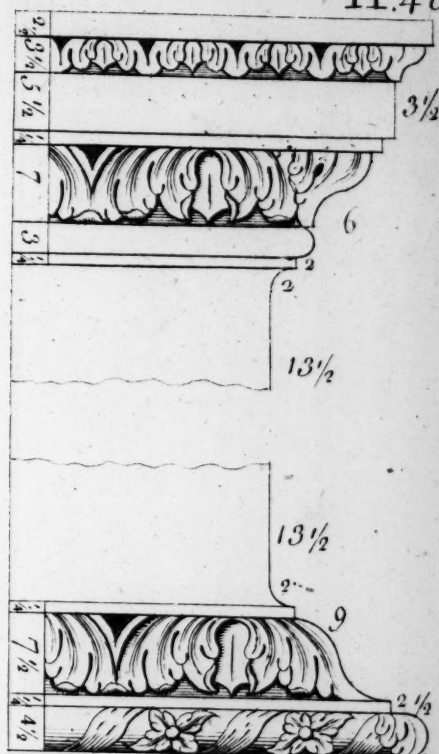
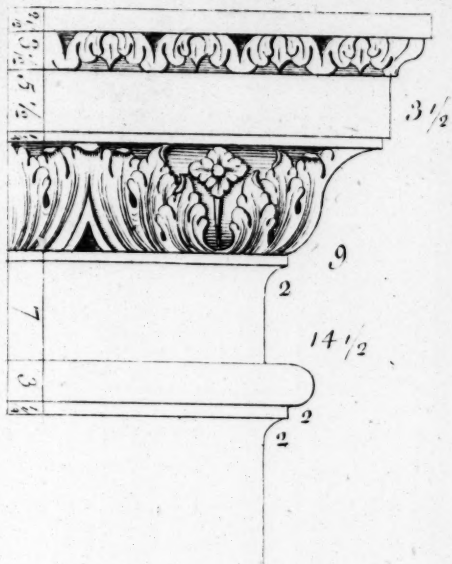




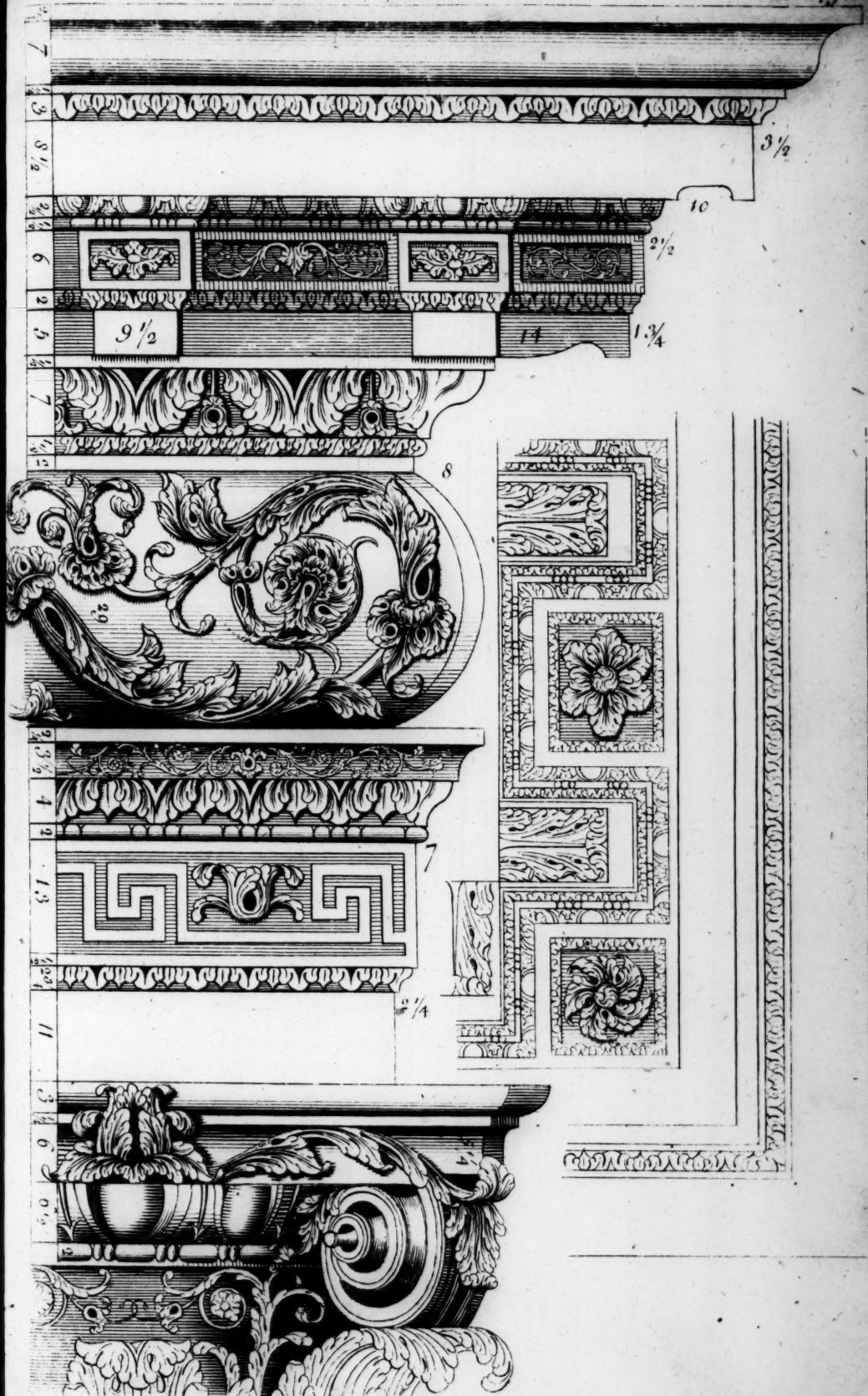




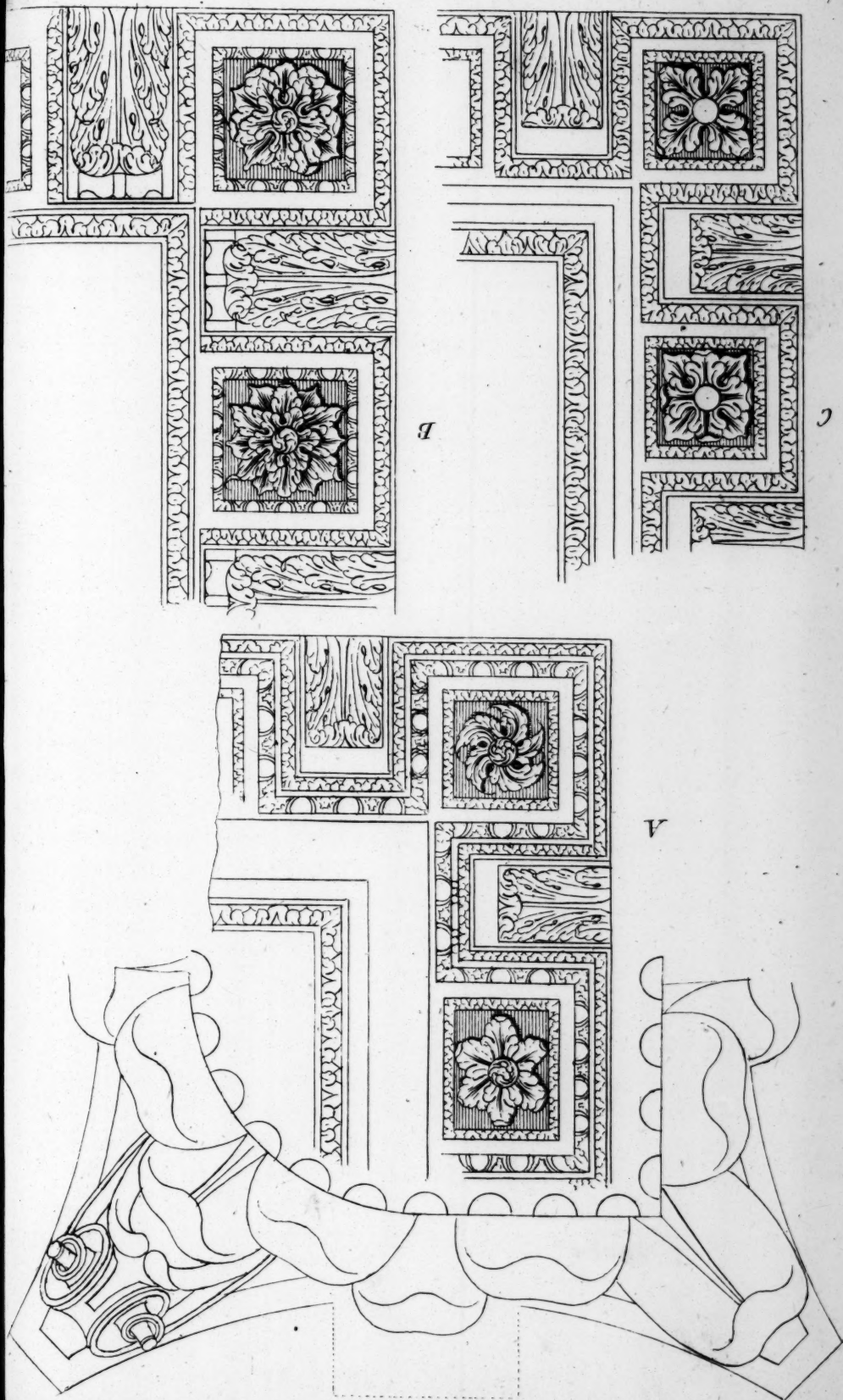




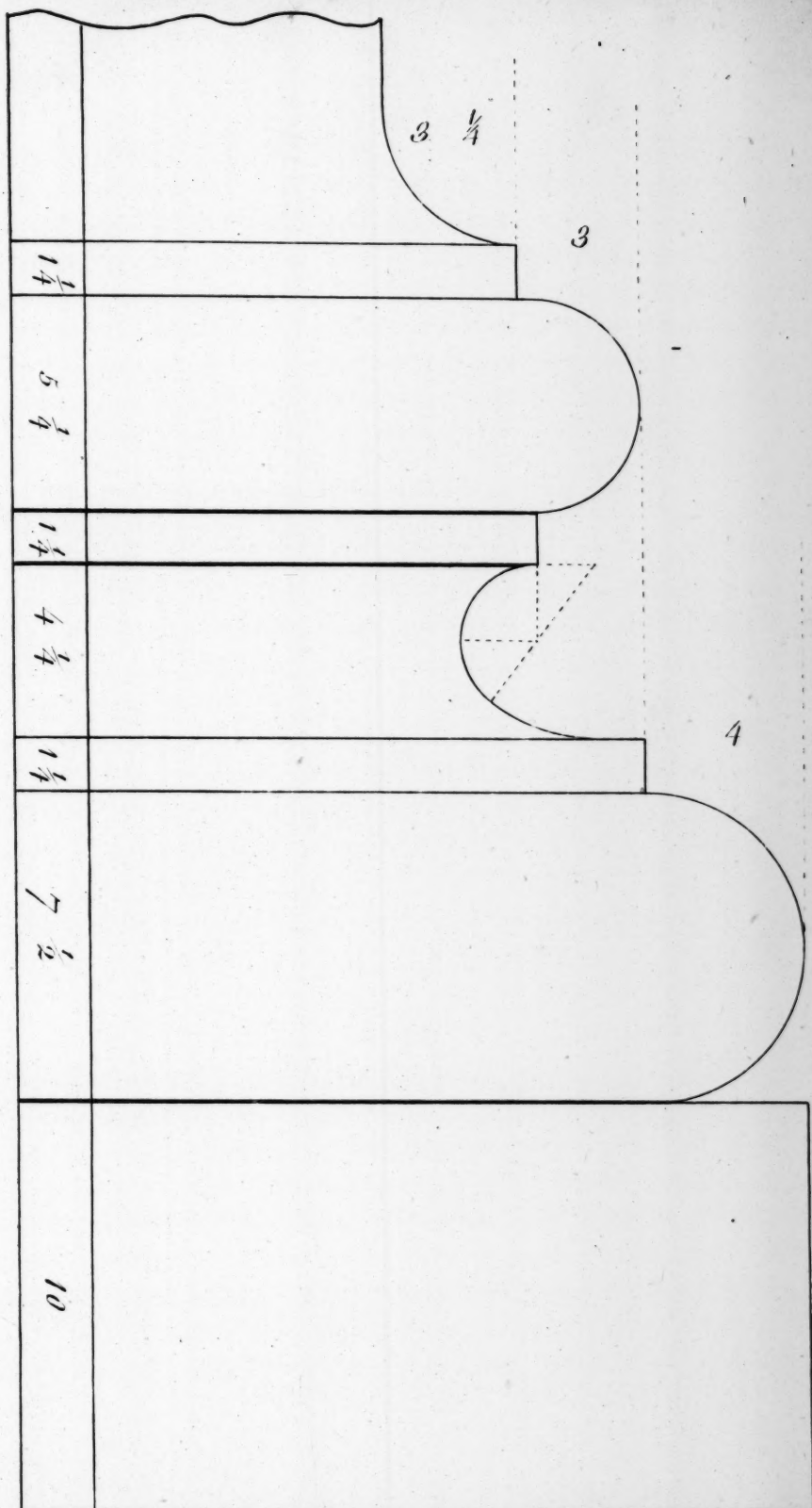












This & the three following Plates are given Gratis



